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FINDING OF NO SIGNIFICANT IMPACT
Montana Army National Guard (ARNG)
Fort Harrison Land Exchange

INTRODUCTION

This Finding of No Significant Impact (FNSI) documents the conclusions of the Environmental Assessment (EA) for the proposed Fort Harrison Land Exchange at Fort William Henry Harrison, Helena, Montana. The EA and this FNSI have been prepared in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality regulation, and Army Regulation 200-2.

THE PROPOSED ACTION

The United States is proposing to acquire in two separate transactions a total of 1,209 acres of private land through a combination of land exchange and direct purchase. The majority of the land proposed for acquisition (1,099 acres) would be obtained through an equal-value land exchange between the United States and two private parties.

The land exchange would transfer a total of 664 acres of Federal property along Sevenmile Creek (Head Ranch) to private ownership in return for 1,099 acres of privately-owned land which is currently under a temporary lease agreement with the ARNG. The land exchange consists of two parts:

a. The 504 acres of the Head Ranch west of Head Lane for 840 acres of land owned by Mr. Frank Gruber.

b. The 160 acres of Head Ranch east of Head Lane for 259 acres of land owned by RV Ranch.

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a. Alternative 2: No Action Alternative.

b. Alternative 3: Land Swap with Grubber and RV Ranch, no urchase of Jorgenson property.

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ANTICIPATED ENVIRONMENTAL EFFECTS

Based on discussions with Montana ARNG personnel, Federal and State agencies and public comment, several areas of potential concern associated with the proposed land exchange were identified. The findings of the EA are summarized below.

Future use of the properties acquired by the United States would not differ from the current land use. Near term changes in the current use of the Head Ranch are not anticipated. However, if the proposed action is implemented some development of the Head Ranch could occur if desired by the new private owners. Impacts to biological and cultural resources, hazardous material and waste management, the noise environment, and socioeconomic resources are not expected to change from existing baseline conditions.

GEOLOGICAL RESOURCES. No change in the baseline conditions of the physiography/geology would occur on lands acquired in the proposed action. Potential exists for changes in the landscape along Seven-mile Creek if either the proposed action or Alternative three are implemented. These changes could occur as a result of a future decision by Mr. Gruber or some other future owner to proceed with some level of development.

No change in baseline conditions of soils would occur on lands acquired by the United States if the proposed action were implemented. Changes in baseline conditions of the Head Ranch could occur. Currently no proposal or plans for development of the area exist. Should development occur at some future date, road construction and home construction could have an adverse impact on soil due to increased potential for erosion.

AIR RESOURCES. There would be no change in the existing level of air quality due to the proposed action. No change will occur in the level of small arms training if the proposed action were implemented. No additional construction is anticipated on land acquired by the United States if the proposed action were implemented. If the proposed action is taken, baseline air quality in the Head Ranch vicinity has an unknown potential to be adversely impacted. Once the land is transferred to private ownership, the potential for development exists. This potential is unknown and subject to the regulatory purview of County and State government.

The current number and duration of helicopter flights would remain unchanged if the proposed action were implemented. There would be no increase in vehicle traffic and all vehicle traffic would continue to be restricted to existing roads.

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NOISE. There would be no change in the existing level of noise if the proposed action were implemented. No change would occur in the level of small arms training. No additional construction is anticipated on lands acquired by the United States. Lands transferred to private ownership have the potential to be developed at some future date. A short-term, moderate adverse noise impact would accompany the construction phase of any development of the Head Ranch. If future residential development of the Head Ranch were to occur, it would produce a long-term, adverse impact to baseline noise levels. The degree of this potential impact would be dependent upon the level of development permitted by the County and the State.

BIOLOGICAL. There would be no change in baseline biological conditions on land acquired by the United States if the proposed action were implemented. There is an unknown potential for adverse impacts to occur to biological resources along Sevenmile Creek if the Head Ranch is developed at some future date. These potential adverse impacts could be mitigated by limiting the kind, type and degree of development. The County and State have the statutory authority to require mitigative measures should future development occur on the Head Ranch.

WATER RESOURCES. No change in the baseline conditions of groundwater would occur on the acquired land if the proposed action were implemented. However, if development of the Head Ranch were to occur in the future, the potential for an adverse impact to the aquifer exists. An evaluation of the groundwater resources in the Head Ranch vicinity concluded that should development of the Head Ranch occur, domestic wells north of Sevenmile Creek would likely not be adversely impacted. Residents south of Sevenmile Creek could have wells adversely impacted if large groundwater use or development were to occur.

Surface water baseline conditions would not change on lands acquired by the United States if the proposed action were implemented. No change in baseline conditions of the quality or quantity of water in Sevenmile Creek is anticipated as result of implementing the proposed action. Surface waters of Sevenmile Creek are currently used for agricultural purposes. The stream is "over appropriated" with respect to agricultural use. This means that in any given year the stream can be de-watered regardless of actions of present or future owners of the Head Ranch because the Head Ranch water right is not sufficiently "senior" to ensure instream flow in dry years.

Should development occur, adverse impacts to the stream bank along Sevenmile Creek could occur if the County fails to impose a setback requirement from the creek.

The potential impact to the stream may be mitigated by County restrictions and State regulations relating to construction in a floodplain.

CULTURAL. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their actions on historic properties. The Montana ARNG Historical Preservation Planning Committee, which includes the Montana State Historic Preservation Officer, has reviewed the impacts that the proposed action will have on the historic and prehistoric sites located on the Head Ranch. The committee's recommendation has been submitted to the State Historic Preservation Office. The recommendation, which is being implemented in the proposal is, do not include the one historic site eligible for listing on the National Historic Register (Head Ranch buildings) in the land exchange. The three acres, including the Head Ranch buildings, will remain Federal property and under the control of the United States. A fence will be erected to protect the buildings.

All other historic and prehistoric sites have been thoroughly evaluated and documented by professional archaeologists. These sites are recommended to be included in the land exchange.

HAZARDOUS MATERIALS AND HAZARDOUS WASTE MANAGEMENT. No change in the current level of waste generation will occur if the proposed action is implemented.

SOCIOECONOMICS. No change in baseline employment conditions would occur if the proposed action were implemented.

COMMENTS

Comments on this FNSI and Final EA should be submitted within 30 days to: Department of Military Affairs, ATTN: Environmental Office, 1100 North Main Street, P.O. Box 4789, Helena, MT 59604-4789, telephone 406-444-7943. All comments and questions will be referred to the Montana ARNG and National Guard Bureau for consideration.

Copies of the FNSI and the Final EA are available for review at the Lewis & Clark Public Library, and the State Library.

CONCLUSION

In accordance with the Council on Environmental Quality regulations implementing the National Environmental Policy Act of 1969, as amended, and Army Regulation 200-2, an assessment of the identified environmental effects has been prepared for the actions described in the Environmental Assessment. The determination has been made that the action will have no significant impact to the quality of the human or natural environment. Therefore, an environmental impact statement is not warranted.

18 July 95
Date

WILLIAM C. BILO
Brigadier General, GS
Deputy Director, Army National Guard

MONTANA ARMY NATIONAL GUARD
HELENA, MONTANA

FINAL
Environmental Assessment

Montana Army National Guard
Fort Harrison Land Exchange

JULY 1995

Department of Military Affairs
State of Montana
PO Box 4789
Helena, Montana 59604-4789

EXECUTIVE SUMMARY

The United States is proposing to acquire a total of 1,209 acres of private land through a combination of land exchange and direct purchase. The majority of the land proposed for acquisition (1,099 acres) would be obtained through an equal-value land exchange between United States and two private parties to be licensed for use by the Montana Army National Guard(the Guard).

The land exchange would transfer a total of 664 acres of federal property along Sevenmile Creek (a.k.a. Head Ranch) to private ownership in return for 1,099 acres of privately-owned land which is currently under a temporary lease agreement with the Guard (Figures 1 - 3). The land exchange consists of two parts: 1) 504 acres of the Head Ranch west of Head Lane for 840 acres of land owned by Mr. Frank Gruber (Figures 2 and 4) and 2) 160 acres of Head Ranch east of Head Lane for 259 acres of land owned by RV Ranch (Figures 2 and 4).

An outright federal purchase of 110 acres from Mr. Carl Jorgenson of Wenatchee, WA for $145,600 would bring the total acres acquired in the proposed action to 1,209 acres (Figure 4).

The purpose of the exchange is to consolidate federal holdings to ensure that existing live-fire ranges and training areas on the Fort Harrison complex, a portion of which is federally owned, remain usable into the future.

The Army Corps of Engineers is the entity that handles real estate acquisitions for the Department of Defense. The Corp is involved in the planning for the proposed action (and the alternatives) and will continue to handle its customary obligations.

In addition to the Proposed Action, the following alternatives were considered: Alternative 2: No Action Alternative; Alternative 3: Land Swap with Gruber and RV Ranch, no purchase of Jorgenson property (Figures 2 and 5).

Future use of the 1,209 acres acquired by the United States would not differ from the current land use. Future use of the Head Ranch is not within the control of the United States and is beyond the scope of this EA. If the Proposed Action is implemented, some development of the Head Ranch, consistent with state and local ordinances, could occur.

Analysis of the potential impacts from the Proposed Action indicate that no change would occur in existing baseline conditions for geological resources, cultural resources and socioeconomic conditions. Minor short-term adverse impacts could occur to air and water resources if development were to occur on the Head Ranch.

No change would occur in existing baseline noise levels and hazardous waste management operations.

If the No Action Alternative were selected it is likely that at least one of the existing short-term leases granted by private landowners would not be renewed and some form of real estate development would occur. If this alternative was selected operation of the small arms ranges at Fort Harrison would remain highly vulnerable to development within the surface danger zone. Such development would require the ranges to permanently shut down.

If Alternative 3 (Land Exchange Only, No Purchase of Jorgenson Property) were implemented the total acres acquired would decrease from 1,209 to 1,099 acres of private land in return for the Head Ranch property. This alternative offers less protection from residential encroachment than does the proposed action. The Jorgenson property is already platted and failure to implement the Proposed Action would likely result in development of the Jorgenson property. However, if this alternative was selected, operation of key firing ranges would continue into the future.

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Acronyms and Abbreviations

AH-1	Cobra Helicopter
AH-64	Apache Helicopter
ARM	Administrative Rules of Montana
BLM	Bureau of Land Management
CO	Carbon Monoxide
dBA	A-weighted Decibel
DMAMT	Department of Military Affairs, Montana
DRMO	Defense, Reutilization and Marketing Office
EA	Environmental Assessment
ECWT	Extreme Cold Weather Training
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FMO	Facilities Management Office
HW	Hazardous Waste
Ldn	Day/Night Average Sound Level
MAAQS	Montana Ambient Air Quality Standards
MDFWP	Montana Department of Fish, Wildlife and Parks
MOSQ	Military Operational Speciality Qualification
MTNHP	Montana National Heritage Program
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_x	Nitrogen Oxides
O_3	Ozone
OH-58	Kiowa Helicopter
PA	Preliminary Assessment
PAS	Preliminary Assessment Screen
Pb	Lead
PM	Particulate Matter
PMM	Principle Meridian Montana
POL	Petroleum, Oils and Lubricants
RCRA	Resource Conservation and Recovery Act
SI	Site Investigation
SO_x	Sulfur Oxides
UH-1	Huey Helicopter
USGS	United States Geological Survey
VA	Veterans Administration
VOCs	Volatile Organic Compounds

1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION

The United States is proposing to exchange 664 acres of federal property along Sevenmile Creek (a.k.a. Head Ranch) for a total of 1,209 acres of privately-owned land currently leased by the Guard (Figures 1 - 3). The lease is for a 5-year term, annually renewable thereafter, but may be terminated by either party at any time. Future use of the 1,209 acres would not differ from the current land use.

The purpose of the exchange is to consolidate federal holdings in order to ensure that existing live-fire ranges and training areas on the Fort Harrison complex, a portion of which is federally owned, remain usable into the future (Figure 7). Currently, the safety fans for all existing firing ranges at Fort Harrison extend onto private lands under lease to the Guard. These ranges are:

-- pistol range (.45, 9mm)
-- M16 zero range (5.56mm)
-- M16 qualification (5.56mm)
-- M60 range (7.62mm)
-- M203 range (40mm practice)
-- M72 range (35mm subcaliber)

An inevitable consequence of suburban residential expansion in the Helena Valley is the encroachment of residential development around Fort Harrison and the loss of training areas due to the incompatibility of the two land uses. Recent expansion of real estate developments in the west Helena area and the potential development of land currently leased by Guard (verbal communication) indicate training at Fort Harrison will be compromised if the land is not consolidated. In particular, private land owned by and leased from Mr. Frank Gruber (Figure 3) is under active consideration for residential development. The development of this land would compromise the integrity of the existing range safety fans and require the permanent closure of these ranges. Insufficient federal land exists to allow relocation of existing ranges to other areas of Fort Harrison.

The Army Corps of Engineers is the entity that handles real estate acquisitions for the the Department of Defense. The Corps is involved in the planning for proposed action (and the alternatives) and will continue to handle its customary obligations.

1.1 LOCATION OF THE PROPOSED ACTION

Fort William Henry Harrison is located approximately 3 miles west of Helena (Figure 1). The Fort Harrison VA Center abuts the south boundary of Fort Harrison proper (Figure 1). The VA Center is an independent federal facility administered by the Department of Veterans Affairs. Additionally, a 40 acre sewage lagoon within the

perimeter of the Head Ranch is owned and operated by the VA Hospital and is not part of the land exchange (Figure 2).

Fort Harrison is composed of two separate (but proximal) parcels, consisting of the primary (developed) portion and a secondary (undeveloped) area adjacent to Sevenmile Creek known as the Head Ranch (Figure 2). The primary Fort area is 945.07 acres located on portions of sections 15, 16, 17, 21 and 22 of Township 10 North, Range 4 West, Principle Meridian Montana (PMM). This area is part of the original reservation and contains the former cantonment and the present administrative area. The Head Ranch contains 667.43 acres and is situated in sections 4, 9, 10, and 11, Township 10 North, Range 4 West, PMM (Figure 2).

The Head Ranch, which includes water rights, has various current and potential uses. The land lies in a gentle valley running northwest to southeast and is nearly bisected by Sevenmile Creek flowing to the southeast. The higher ground is composed of poor soils and is best suited to grazing. The valley floor has better soils, can be flood-irrigated from the creek, and may be used for grazing or hay production. The presence of an adjoining Veterans Administration sewage lagoon limits the desirability of some lands, but most of this tract has a much greater potential for subdivision than does the land proposed for acquisition. There are several new homes on small acreage tracts just north of the Head Ranch. Electric and telephone services are available along Head Drive.

The lands sought for acquisition lie primarily to the west of Fort Harrison (Figure 4). Topography varies. The majority of the terrain is moderately to steeply sloping open grasslands. The open slopes are dissected by gullies, ravines and coulees forming cutbanks and locally rugged terrain in association with draws and coulees. The area is essentially devoid of timber, except for an occasional conifer tree (typically juniper). Grasslands are composed of a mixture of native and introduced annual and perennial species.

1.2 MISSION

The Montana National Guard is charged with meeting the mandates of the United States Constitution and the Montana Constitution. Foremost is the mission of ensuring domestic tranquility. In order to perform its mission, the Guard must train and equip civilian-soldiers to be ready to respond to any emergency, be it a natural disaster or civil disturbance, as directed by the Governor. In the case of a national emergency, the Guard would respond under the direction of the President of the United States.

Fort William Henry Harrison serves as the focal point for the majority of all training in Montana. Fort Harrison is the only Army training post in Montana and its mission is to provide

training areas and facilities for the Army National Guard, Army Reserve and Active Duty military.

1.3 PERSONNEL

Approximately 170 employees work full-time at the Fort Harrison complex in various administrative, training and maintenance functions. Table 1.3 lists the current level of training in man-days from 1992 to the present.

Table 1.3 Number of personnel trained at Fort Harrison (man-days)

Year	Man-days
1992	107,021
1993	115,443
1994	125,000

1.4 OPERATIONS AND TRAINING

The Fort Harrison complex currently provides the following military training opportunities:

- -- Military Ranges (small arms only)
- -- Military Operational Specialty Qualification (MOSQ) Schools
- -- Dismounted Infantry Training
- -- Land Navigation Course
- -- Thermal Targets for M1 Tank Lane Training
- -- Bivouac Area
- -- Special Operations Training
- -- Low Level Helicopter Training

In addition to the military training listed above, training opportunities occur for various Montana Sheriff's Departments as well as the Montana Highway Patrol and various city and county fire departments.

1.4.1 Military Firing Ranges

Military firing range use by type of range is presented in Table 1.4.

Table 1.4 Military Firing Ranges and Usage	
Type of Firing Range	**Days Used in FY94**
Pistol range (.45, 9mm)	39
M16 zero range (5.56mm)	25
M16 qualification (5.56mm)	48
M60 range (7.62mm)	25
M203 range (40mm practice)	21
M72 range (35mm subcaliber)	21

1.4.2 Military Operational Specialty Qualification (MOSQ) Schools

The Montana Army National Guard Military Academy coordinates all MOSQ schools and provides classroom and training support to several other federal and state agencies. In total, 30 different courses are offered at Fort Harrison with a total enrollment of approximately 1200 personnel (students and instructors) during the year.

1.4.3 Dismounted Infantry Training

Dismounted training occurs generally once per month during summer with up to company-size units (120 soldiers). Maneuvers are limited to foot-traffic and support vehicles are restricted to existing roads.

1.4.4 Land Navigation Course

The land navigation course is used approximately once per month by up to platoon-size units (foot traffic only). The course is used between 35 and 40 times per year.

1.4.5 Thermal Targets for M1 Tank Lane Training

Tank silhouettes made of plywood fitted with insulated electric heat coils are positioned at known distances from a tank course. M1 "Abrams" tank crews practice acquiring these targets during routine training. No rounds are fired at these targets. Tanks are restricted to existing roads and parking lots during training.

1.4.6 Bivouac Area

The area west of Fort Harrison near the M60 range is designated as a troop bivouac (camp) area. During summer months this area receives platoon and company level use for a total of 10-15 days.

1.4.7 Special Operations Training

The landing strip at Fort Harrison (also known as the Marshall Drop Zone) is used during special operations training. During this training C-141s and C-130s use this area for dropping 15 pound practice bundles and parachuting of personnel. Special Operations forces from active military components conduct infiltration (insertion) and exfiltration (extraction) exercises from helicopters flying at low levels.

1.4.8 Helicopter Training

The Fort Harrison training area has been utilized by the Guard for low-level (below 500 feet) flight and other related training activities since 1960. Helicopters practice "touch and go's" and hovering on a landing strip at Fort Harrison as well as sling loading.

The actual hours of helicopter flight time in the Fort Harrison vicinity is not tracked. Three types of helicopters are flown by the Guard: 18 AH-1 (Cobra) helicopters, 9 UH-1 (Huey) helicopters and 18 OH-58 (Kiowa) helicopters. These aircraft are flown in relative proportion to their numbers, with Cobra and Kiowa helicopter flights being roughly equal at 40 percent each and Huey flights at 20 percent of total flight time.

The number of aircraft using the Fort Harrison training area typically varies from 2-8 aircraft during normal weekday operations. During drill weekends (3 of 4 weekends/month) up to 12 helicopters may be flown in the Fort Harrison training area. Rarely are more than six helicopters present at one time in the area. Flight duration is between 1.5 and 2.0 hours.

1.5 SCOPE OF THE ENVIRONMENTAL REVIEW

An environmental assessment (EA) will be prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council of Environmental Quality Regulations, and Army Regulation 200-2. The EA will evaluate the proposed land exchange. The scope of the EA will address potential impacts to the biological, physical, and human environments of the area as a consequence of the proposed action and alternative actions.

To assist in identifying potentially significant issues, coordination is being conducted with federal, state, county and local agencies. Issues identified through this process will be

addressed in the environmental assessment. A list of agencies contacted is listed in Appendix B.

Preliminary Assessment Screenings (PASs) were conducted in October of 1994 by the MT ARNG. No environmental hazards were identified on any of the properties involved in the exchange. The PASs are available for review in the MT ARNG Environmental Office.

This EA examines two separate land transactions, the land exchange and the outright purchase of the Jorgenson property, in one document due to the common environmental issues involved in the two projects.

2.0 DESCRIPTION OF ALTERNATIVES TO THE PROPOSED ACTION AND POTENTIAL FUTURE CUMULATIVE ACTIONS

2.1 ALTERNATIVES CONSIDERED BUT NOT ADVANCED

At the time of the writing of the draft EA, an appraisal for the lands under consideration for exchange had not yet been completed. The draft EA included several alternatives which have since been rendered unfeasible by the final appraisal.

2.1.1 Land Swap for Gruber Property Only

This Alternative was listed as Alternative 3 in the draft EA. Had the appraised value of the Head Ranch been so low as to preclude an exchange for more that just the Gruber property, this alternative would have remained viable. However, the appraised value of the Head Ranch allowed for both the Gruber property and a portion of the RV Ranch to be acquired in the exchange.

2.1.2 Land Swap for Gruber Property plus All Inholdings

This Alternative was listed as Alternative 4 in the draft EA. Had the appraised value of the Head Ranch been so high as to allow trade for all inholdings (3,570 acres) within the perimeter as outlined in Figure 3, this alternative would have remained viable. While offering the greatest long-term protection for current training operations at Fort Harrison, the land appraisal values (as well as other constraints) render this alternative unfeasible.

2.1.3 Outright Purchase of All Inholdings, Retain Head Ranch

This alternative was listed as Alternative 5 in the draft EA. It differs from Alternative 4 in the draft EA in that all private land would be purchased rather than exchanged and the Head Ranch property would be retained. This alternative is no longer viable because the private parties involved in the exchange will not wait the necessary time (approximately 2 years) for an appropriation to be completed. It should also be noted that it is unknown what level of support such an appropriation request would receive from Department of the Army and Department of Defense. Congressional support appears even more uncertain given the austere budgets currently under consideration by key committees in Congress.

2.2 ALTERNATIVES TO THE PROPOSED ACTION

2.2.1 No Action Alternative (Alternative No. 2)

If no land exchange occurs, it is likely that at least one of the existing short-term leases granted by private landowners would not be renewed and some form of real-estate development would occur. In particular, it is likely that some development on the Gruber

property would occur in the near future. Such development would impinge on the impact area (surface danger zone) of one or more firing ranges. Army regulations prohibit operation of firing ranges with buildings, structures or people present inside the surface danger zone.

If the Gruber property is developed, training opportunities will be significantly curtailed. The impact to operations and employment at Fort Harrison is unknown, but has the potential to be highly adverse. It is unlikely that more than a few employees would be impacted in the short-term (1-3 years) by closure of firing ranges or loss of other training opportunities at Fort Harrison.

In the draft EA, it was stated that some opportunity existed to relocate firing ranges to the Limestone Hills west of Townsend, Montana. A relocation of existing live-fire ranges at Fort Harrison to the Limestone Hills is not feasible. In 1984 the Montana National Guard entered into a 30-year Right-of-Way lease agreement with the BLM. This lease agreement allows for use of the area from the second Monday in April to 30 November each year.

A major amendment to the Right-of-Way agreement would be required in order to allow relocation of firing ranges. Such an amendment would require an Environmental Impact Statement (EIS) due to the potential adverse impact to wintering big game animals (personal communication, Mr. Bob Rodman, Butte District Office, BLM). The area where firing ranges would be established serves as an important deer and elk winter range. The BLM has consistently denied live-fire and other training during winter months due to the conflict with wintering big game animals.

Furthermore, the BLM will not consider amending the Guard's existing Right-of-Way use agreement unless the Guard formally applies for a federal withdrawal of the lands in question (personal communication, Mr. Bob Rodman, Butte District Office). Such a withdrawal action would transfer these public lands under BLM management to the Department of Defense. Such a withdrawal action would require an EIS and Congressional approval.

Regardless of the availability of Limestone Hills, loss of training opportunity at Fort Harrison is likely to have an adverse impact on training dollars and ultimately personnel levels at Fort Harrison in the mid to long-term (5-10 years). Reduced training opportunities would result in the generation of fewer training man-days (cost of funding one soldier for one active-duty day). Man-day use of the facility is used to justify funding levels for personnel support of training and maintenance of facilities. A significant decrease in man-days would ultimately result in decreases in funding levels for the training complex at the Fort, leading to further downsizing of personnel and facilities.

2.2.2 Land Swap with Gruber and RV Ranch, No Purchase of Jorgenson Property (Alternative No. 3)

This alternative could be selected if: 1) either Mr. Jorgenson or the Corps of Engineers were to withdraw from further negotiations, and 2) the necessary funds could not be acquired to purchase the land in question.

If only the Gruber and RV Ranch property were acquired in the land exchange, the total acres acquired would decrease from 1,209 to 1,099 acres of private land in return for the Head Ranch property (Figures 2 and 5). This alternative offers less protection from residential encroachment than does the proposed action. If development were to occur on the Jorgenson property, use of the Marshall Drop Zone would have to be scaled back or terminated consistent with the type of development. This would result in a loss of parachute training at Fort Harrison and a reduction in aviation training. Additionally, the M60 firing range would have to be shut down. Implementation of this alternative would allow for the continued operation of all other existing firing ranges into the future.

The possibility of further encroachment immediately west of Fort Harrison (Figure 4) and the attendant conflicts between incompatible uses would remain with this alternative.

2.3 DESCRIPTION OF POTENTIAL CUMULATIVE FUTURE ACTIONS

An EA of proposed conversions from Cobra (AH-1) helicopters to a combination of Huey (UH-1H) and Black Hawk (UH-60) helicopters has been produced by the Montana Army National Guard. The EA was approved by National Guard Bureau following a public comment period. This proposed conversion would not impact existing training operations at Fort Harrison.

A Master Plan for Fort Harrison has been produced by the Montana Army National Guard Facilities Management Office (FMO) and forwarded to the National Guard Bureau for review and approval. The Master Plan includes proposals for construction of several new buildings to replace existing structures.

The Montana Army National Guard is currently in the process of reorganizing and re-aligning its existing force structure. The future configuration of the Guard is yet to be finalized;. however, no changes in the existing level of use of Fort Harrison are anticipated.

3.0 AFFECTED ENVIRONMENT

3.1 GEOLOGICAL RESOURCES

3.1.1 Physiography/Geology

A general description of the geology and hydro-geology of the Head Ranch and adjacent lands can be found beginning on page 4 of Appendix A "Hydrogeology Addendum, Montana Army National Guard Fort Harrison Land Exchange, Helena, MT" prepared by PRC Environmental Management, Inc. The interested reader may also refer to "Hydrogeology of the Helena Valley-Fill Aquifer System, West-Central Montana" (U.S. Geological Survey, Water-Resources Investigations Report 92-4023 by David W. Briar and James P. Madison) for a good description of the general physiography/geology of the Helena Valley. The geology of the Helena valley and surrounding hills has been described in detail in reports by Knopf (1913), Lorenz and Swenson (1951), Knopf (1963) and Schmidt (1977, 1986).

The land exchange and purchase will transfer all of the surface and mineral rights to the new owners. The land acquired by the United States will come with all the surface and mineral rights. The Head Ranch will transfer all the surface and mineral rights to the new owners.

3.1.2 Potential Impacts to Physiography/Geography

No change in the baseline conditions of the physiography/geography would occur on lands acquired in the Proposed Action or Alternative 3. The No-Action Alternative could result in changes to the landscape physiography, depending upon the level of development permitted by the county. Potential exists for changes in the landscape along Seven-mile Creek if either the Proposed Action or Alternative 3 are implemented. These changes could occur as a result of a future decision by Mr. Gruber or some other future owner to proceed with some level of development. Mr. Gruber is on record as indicating he has no immediate plans for the Head Ranch and it is beyond the scope of this EA to attempt to address future unconnected actions.

3.1.3 Soils

Soils in the Fort Harrison vicinity are classified as Calciorthids. These are mineral soils which form in dry climates and have a layer of calcium carbonate enrichment at least 6 inches thick within 40 inches of the surface. Calciorthids are formed in alluvial terraces or fans.

Dominant soils on the Head Ranch and private lands under consideration for the land swap are presented in Tables 3.1 and 3.2. Soil types on the Head Ranch are delineated in Figure 6.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Soils in the extreme eastern portion of the Head Ranch (Figure 6) are predominately Fairway silt loams. Soils of this type are associated with riparian/wetlands and with a high water table. These soils fall within the flood plain as delineated by Lewis and Clark County Floodplain Administrator.

Map Symbol and Soil Name	Range Site	Total Production		Characteristic Vegetation	% Comp.
		Kind of Year	Dry Weight lbs/acre		
263E HAUZ-SIEBEN-TOLMAN CHANNERY LOAMS	silty, droughty, 15 to 19 in. PPT zone, Northern Rocky Mountains, Central	favorable	1200	bluebunch wheat grass needle and thread grass western wheat grass other perennial forbs other perennial grasses other shrubs	50 15 10 05 05 05
		normal	900		
		unfavorable	600		
1380 CRITTENDEN-TOLMAN COMPLEX	silty, limey, 10 to 14 in. ppt zone, northern Rocky Mountain Valleys, Central	favorable	1600	bluebunch wheat grass western wheat grass other perennial forbs needle and thread grass green needle grass	30 10 10 10 10
		normal	1200		
		unfavorable	800		
20A FAIRWAY SILT LOAM	silty, 10 to 14 in. ppt. zone. Northern Rocky Mountain Valleys, Central	favorable	2000	bluebunch wheat grass western wheat grass other perennial forbs other shrubs needle and thread grass green needle grass	30 10 10 10 10 10
		normal	1600		
		unfavorable	1100		
465A BEAVERELL-ASHLO VERY COBBLY LOAM		favorable	1000	bluebunch wheat grass needle and thread grass other perennial grass western wheatgrass other perennial forbs other shrubs	55 15 10 5 5 5
		normal	700		
		unfavorable	400		
141E CRAGO-PENSORE CHANNERY LOAMS	silty, limey, 10 to 14 in. ppt zone, Northern Rocky Mountain Valleys, Central	favorable	1100	bluebunch wheat grass needle and thread grass western wheat grass other perennial grasses other perennial forbs	45 20 10 10 5
		normal	800		
		unfavorable	500		
137B MUSSELSHELL - CRAGO COMPLEX	silty, limey, 10 to 14 in. ppt. zone, Northern Rocky Mountaios Valleys, Central	favorable	1100	bluebunch wheat grass needle and thread grasa western wheat grass other perennial grasses other perennial forbs	45 20 10 10 5
		normal	800		
		unfavorable	500		

Table 3.1 List of major soil types found in the Head Ranch and on the private lands under consideration for acquisition via land exchange. Lewis and Clark County, 1994.

Table 3.2 Major Soil Types on the Head Ranch, from SCS Soils mapping, Lewis and Clark County, Montana

Map Symbol	Description
20A	Fairway Silt Loam, 0 to 2% slopes. Soil is more than 60 inches deep with a dark-colored surface layer. Available water capacity in inches: 7.7 - 9.6; Major considerations: Flooding, water table, Landuse may include: rangeland
465A	Beaverell-Ashlo very cobbly loams, 0 to 2% slopes. Soil is more than 60 inches deep with a dark-colored surface layer. Available water capacity in inches: 1.8 - 2.5; Major considerations: none; Landuse may include: rangeland
263E	Hauz-Sieben-Tolman Channery Loams, 8 to 45% slopes. Soil is 20 - 40 inches deep with a dark-colored surface layer. Water capacity in inches: 1.6 - 1.9; Major considerations: slope, depth to hard rock; Landuse may include: rangeland
138D	Crittenden-Tolman Complex, 4 to 35% slopes. Soil is 40 - 60 inches deep with a dark-colored surface layer. Water capacity in inches: 4.2 - 5.5; Major considerations: slope, depth to hard rock; Landuse may include: cropland, rangeland
238B	Assinniboine-Chinook Sandy Loams, 2 to 8% slopes. Soil is more than 60 inches deep with a dark-colored surface layer. Available water capacity in inches: 7.4 - 9.2; Major considerations: none; Landuse may include: rangeland
141E	Crago-Pensore Channery Loams, 15 to 45% slopes. Soils is more than 60 inches deep with a lighter colored surface layer. Available water capacity in inches: 3.2 - 3.8%; Major considerations: slope; Landuse may include: rangeland
738B	Crittenden-Kalsted, Bedrock Substratum, Sandy Loams, 2 to 8% slopes. Soil is 40 -60 inches deep with a dark-colored surface layer. Available water capacity in inches: 4.2 - 5.5; Major considerations: depth to hard rock; Landuse may include: cropland, rangeland.

3.1.4 Potential Impacts to Soils

No change in baseline conditions of soils would occur on lands acquired by the Guard if the Proposed Action were implemented.

No change in baseline conditions would occur on lands acquired by the Guard under the Proposed Action and Alternative 3. Changes in baseline conditions of the Head Ranch could occur. Currently no proposal or plans for development of the area exist. If the No Action Alternative were selected, some level of development on private lands is anticipated. Should development occur, road construction and home construction could have an impact on soil erosion.

3.2 AIR RESOURCES

3.2.1 Climatology and Meteorology

Climate is semiarid. Average annual precipitation in the Helena Valley is 11 inches (NOAA, 1982). Precipitation at high altitudes of the drainage basins which charge the Valley aquifer can exceed 30 inches/year. Daily air temperatures have an annual range from about -35 to 100 degrees Fahrenheit.

3.2.2 Regional Air Quality

The Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS). The standards set the maximum allowable concentrations of pollutants for a given time period. These standards were established to protect human health and welfare and promote the productive capacity of the population. The standards incorporate a reasonable margin of safety and include maximum concentrations for ozone (O_3), carbon monoxide (CO), nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter (PM), particulate matter with a diameter of 10 microns or less (PM_{10}), and lead (Pb).

Areas not meeting ambient air quality standards are designated as nonattainment areas. An area can fail the standard for a specific pollutant, such as lead. This is the case in the east Helena area due to smelting operations. Air quality is determined by comparing ambient air levels with the appropriate primary or secondary NAAQS or Montana Ambient Air Quality Standards (MAAQS). Air Quality in the Fort Harrison area is generally very good.

Air quality in the Helena Valley is strongly influenced by inversions. Inversion strength (lapse rate and thickness of the inversion) and wind speed determine the ventilation or dilution factor. Ventilation is poor in the Helena Valley during the cooler months. Poor ventilation fosters the development of photochemical ozone, and an increase in other pollutants and particulates. Carbon monoxide and particulates reach their highest levels in late

fall and winter in the Helena Valley. Prescribed burning seasons are set by state and county regulations. In the Helena Valley, burning is restricted during periods of inversions or periods with poor ventilation.

3.2.3 Sensitive Receptors

Sensitive receptors include individuals or groups of people who are more susceptible to the effects of air pollution than the general population. Long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, and playgrounds are examples of locations where people who are especially sensitive to poor air quality reside. The VA hospital immediately to the south of Fort Harrison is a sensitive receptor. Of particular concern is the proximity of sources of pollution which emit toxics and carbon monoxide. No significant sources of toxics or carbon monoxide are present in the Fort Harrison Area.

3.2.4 Potential Impacts to Air Quality from the Proposed Action

There would be no change in the existing level of small arms training if the proposed action were implemented. No additional construction is anticipated on land acquired by the Guard if the proposed action were implemented. If the Proposed Action is taken, baseline air quality in the Head Ranch vicinity has an unknown potential to be adversely impacted. Once the land is transferred to private ownership, the potential for development exists. This potential is unknown and subject to the regulatory purview of county and state government.

The current number and duration of helicopter flights would remain unchanged if the proposed action were implemented. (Table 3.3 lists the estimated emission rates of pollutants for the various aircraft that train in the Fort Harrison area.)

It is possible that a small increase in small unit tactic training could occur on the area if the proposed action were implemented. This training would be limited to increases in foot traffic. There would be no increase in vehicle traffic and all vehicle traffic would continue to be restricted to existing roads.

Table 3.3
Helicopter Pollutant Emission Rates (tons/year)

Aircraft Type	Carbon Monoxide	Sulfur Oxides	Nitrogen Oxides	Hydrocarbons	Particulates
Black Hawk	4.57	1.43	6.69	0.32	N
Huey (UH-1)	12.39	2.24	13.33	10.07	N
Kiowa (OH-58)	15.34	0.59	2.66	3.73	N
Total (tons/yr)	32.30	4.26	22.68	14.12	N
Total (lbs/day)	248.46	32.7	174.46	108.62	N
Baseline	250.85	28.54	163.46	136.77	N
Change(lbs/day)	-2.39	4.23	11.0	28.15	N
Change (%)	-1.00	15.00	6.0	26.0	N

N = Negligible
Source: Guard, 1993; U.S. Army, 1993

3.2.5 Potential Impacts to Air Quality from the No Action Alternative

If no action were taken, baseline conditions have an unknown potential to change depending on the individual private land owner's desire to proceed with some level of development on their respective property and any restrictions that may be placed on such development by local or state government.

3.2.6 Potential Impacts to Air Quality from Alternative 3 - Land Swap with Gruber and RV Ranch, No Purchase of Jorgenson Property

The potential impacts to air quality under Alternative 3 would be the same as described in 3.2.4 with the following exception. The Jorgenson property would remain in private ownership and the potential for development of this property would remain high. Should this land be developed, some short-term adverse impacts to local air quality would be expected during construction of residences, roads and utilities.

3.3 NOISE

Sounds which disrupt normal activities or otherwise diminish the quality of the environment are designated as noise. Noise can be stationary or transient - intermittent or continuous.

3.3.1 Noise Descriptors

Community response to noise is based on a subjective assessment of the daily noise environment. Factors that affect this subjective assessment include the noise levels of individual events, the number of events per day, and the time of day at which the events occur. Most environmental descriptors of noise are based on these

three factors, although they may differ considerably in the manner in which the factors are taken into account. Appendix D contains additional information on noise.

3.3.2 Potential Noise Impacts from the Proposed Action

There would be no change in the existing level of small arms training if the proposed action were implemented. No additional construction is anticipated on lands acquired by the Guard if the proposed action were implemented. Under the Proposed Action, lands transferred to private ownership have the potential to be developed at some future date. A short-term, moderate adverse noise impact would accompany the construction phase of any development of the Head Ranch. If future residential development of the Head Ranch were to occur, it would produce a long-term, adverse impact to baseline noise levels. The degree of this potential impact would be dependent upon the level of development permitted by the county and the state.

Table 3.4 details estimated Sound Exposure Levels generated by the various aircraft that either currently train or have the potential to train in the Fort Harrison area. Currently, the Guard flies Huey, Cobra and Kiowa (OH-58) helicopters. An EA on the proposed conversion to a combination of Blackhawk (UH-60) and Huey helicopters has been accomplished. If this conversion were to occur, the Cobra helicopters currently flown by the Guard would be replaced by a combination of Huey and Blackhawk helicopters. A remote possibility exists for conversion from Cobra and Huey helicopters to Apache (AH-64) helicopters. This alternative is discussed in detail (along with other helicopter conversion alternatives) in the Guard Helicopter Conversion, Helena Regional Airport EA (on file at the Environmental Office of the Guard).

The actual number of hours by aircraft per year in the Fort Harrison area would not increase over existing (baseline) levels if the proposed action were implemented. The Apache and Black Hawk helicopters are quieter than the Huey and Cobra helicopters currently operated by the Guard.

Table 3.4
Helicopter Noise Levels (Flyover) at 1,000 Feet Above Ground Level

Distance to Side of Path (Feet)	Sound Exposure Levels, dBA					
	Huey	Black Hawk	Difference (dBA)	Cobra	Apache	Difference (dBA)
0	92	87	5	91	85	6
100	92	87	5	91	85	6
200	92	87	5	91	85	6
300	92	87	5	91	85	6
400	92	87	5	91	84	7
500	91	87	4	90	84	6
600	91	86	5	90	84	6
700	91	86	5	89	84	5
800	90	86	4	89	83	6
900	90	86	4	89	83	6
1,000	90	86	4	88	83	5

Sound Exposure Levels represent the sound level that would result if all of the sound energy of an event occurred during one second. Overflights, which last for about 20 seconds, have Sound Exposure Levels several decibels higher than the maximum sound level of the event. Source U.S. Army, 1992.

3.3.3 Potential Noise Impacts from the No Action Alternative

The potential for increased development on both the Gruber and Jorgenson property is high. Should residential development occur within the existing surface danger zone of small arms ranges, these ranges would be shut down. This would reduce overall noise levels in the Fort Harrison vicinity in the short term. Over time, further residential development would lead to increases in noise which are the cumulative product of many sources, i.e., traffic, barking dogs, children at play, etc.

As residences are constructed, Guard low-level helicopter flights would be adjusted to avoid overflights of residences. The overall level of noise in the Fort Harrison vicinity from helicopters would not decline in the short term; only the flight routes would change. In the long term, the Guard would likely reduce the number of training sorties to Fort Harrison and, in particular, the number of night training sorties. This would occur once development reached a point where noise could no longer be sufficiently mitigated by simply changing the flight path.

3.3.4 Potential Noise Impacts from Alternative 3 - Land Swap with Gruber and RV Ranch, No Purchase of Jorgenson Property

If Alternative 3 were selected and implemented, development of the Jorgenson property could occur. As discussed previously, if development of the Jorgenson property were to occur, the M60 firing range would have to be shut down for safety reasons. All other small arms ranges could continue operation. Development would also impact future use of the Marshall Drop Zone (adjacent to the Jorgenson property). It is anticipated that parachute drops would have to be significantly altered or curtailed and helicopter training flights further restricted to avoid conflicts with residences. Some decrease in aviation noise would occur if Alternative 3 were selected. The shutdown of the M60 firing range would result in a decrease in noise from live-fire training.

The overall number of helicopter flights probably would not diminish in the short term if the Jorgenson property were not acquired. However, as development occurred, helicopter flight paths would be adjusted to minimize disturbance of residences.

3.4 BIOLOGICAL RESOURCES

For the purpose of analysis in this EA, biological resources include the native and naturalized plants and animals in the vicinity of Fort Harrison.

The Montana Natural Heritage Program (MTNHP, 1993) was consulted for information on sensitive species near helicopter flight paths and training areas. This information is located in the Montana Army National Guard Helicopter Conversion Environmental Analysis dated September 1994.

3.4.1 Big Game Species

3.4.1.1 Elk

Portions of the existing lease area serve as important elk winter range (Gayle Joslin, Area Wildlife Biologist, Montana Department of Fish, Wildlife and Parks (MDFWP), personal communication).
No important elk winter range would be acquired by the Guard under any of the three Alternatives. However, existing military operations on Fort Harrison do have the potential to impact elk and thus a discussion of the existing environment with respect to elk is warranted.

The northwest portion of the existing lease (Figure 3) is the terminal point of a system of ridges and hills which collectively serve as important winter range and as a travel corridor during certain months. The axis of this system of hills and ridges is roughly 15 miles long and trends along a northwest to southeast

axis, encompassing Willit Ridge, War Eagle Hill and extending to Stemwinder Hill (Figure 3).

The Blue Cloud-Cherry Creek area is on the southeastern portion of the above-mentioned series of ridges and hills. Cherry Creek lies immediately north of the lease area while Blue Cloud Creek runs through the southwest portion of section 19 in the lease area (Figure 3). Cherry Creek area is particularly important to wintering elk. Portions of Blue Cloud Creek are also important to elk.

As many as 70 elk have been observed on the Blue Cloud-Cherry Creek area during the winter (Gayle Joslin, MDFWP, letter dated June 16, 1992). Aerial survey results of the area during winter months have been conducted by MDFWP. The results of these surveys are on file with the Environmental Office, Guard.

Most elk use on the lease area occurs from December through April. However, use is subject to local snow conditions on adjoining summer range and fall staging areas. As many as 45 elk have been observed during winter on Stemwinder Hill in Section 17 on the lease area (February 8, 1989).

Adjacent areas receive elk use during winter. The results of aerial surveys indicate that adjacent areas receive more extensive elk use overall than the existing lease area. Cherry Creek (immediately to the North of the lease area) receives substantial winter use by elk. A herd of 67 wintering elk were observed in Section 12 on April 20, 1991. Note that aerial surveys capture elk use only on a given day. However, when the pattern of aerial observations are considered in total, conclusions may be made about the importance of an area to elk.

The pattern of observations made during aerial surveys indicate that portions of the existing lease area are important elk winter range; however, adjacent areas receive greater use. No systematic survey of elk use on the existing lease area has occurred, and thus it is impossible to quantify the importance of winter range on the lease area relative to adjacent areas.

Elk Travel/Movement Corridors: As noted above, the existing lease area lies at the extreme southeastern portion of the system of ridges and hills used by elk as a travel corridor during winter months. Elk do not use the same route to travel during fall due to lack of cover. Stemwinder Hill (located on the lease area) is on the southeastern end of the corridor. Because of its terminal position, elk movement is not impeded by roads or training activities (Figure 3).

If the Proposed Action were implemented, little elk winter range would be acquired. Some level of development may occur on elk winter range if it remains in private ownership.

No evidence exists that elk use other portions of the lease area to travel between seasonal use areas. This is consistent with the topography and cover of the area. The only security cover on the area is found along two drainages which run more or less perpendicular to the route elk would need to take to access Cherry Creek.

Elk Calving Areas/Summer Range: Elk do not use the lease area for calving. Elk move in the Sweeney Creek drainage to calve. Elk do not use the lease area during summer and fall. Use occurs primarily during winter and early spring.

Elk Security: Elk are not known to use the site during the hunting season. Due to the lack of timber on the lease area, elk would not be provided security during the hunting season.

Elk Summary: 1) The northwest portion of the existing lease area serves as important elk winter range and is part of a system of hills and ridges which collectively serve as key winter/spring use areas. 2) Elk use on the lease area is seasonal, the major use occurring during winter and early spring. Elk do not calve on the lease area. The temporal aspect of use by elk has important consequences with respect to potential disturbance by training activities. Winter training exercises would not occur near elk wintering areas. Training in spring would be limited to accessible sites at the eastern portion of the lease area, well away from areas elk occupy. 3) A system of hills and ridges extending northwesterly from Stemwinder Hill to Willit Ridge serves as both key winter range and a travel corridor between seasonal use areas. Due to a combination of topography and the location of winter range on the lease area, elk movement would not be adversely affected by the proposed training that would occur should the area be acquired. 4) The area does not provide security cover and thus does not receive elk use during the hunting season. It is not an important area with respect to hunting season security cover.

3.4.1.2 Mule Deer

As many as 170 mule deer are estimated to use the Blue Cloud-Cherry Creek area during winter months (Gayle Joslin, MDFWP, letter dated June 16, 1992). Mule deer use of the existing lease area is less seasonal than elk use. Mule deer are present on the area during all seasons; however, use is heaviest during winter months when mule deer move to south-facing slopes which have been blown free of snow. The actual lease area serves as important winter range; however, no systematic census of mule deer on the lease area has occurred.

Mule Deer Distribution: Mule deer use is typically restricted to the steepest portions of the study area and to swales, coulees and drainages. Browse distribution is restricted to moist areas. 30

cattle grazing on the area has reduced browse on portions of the area.

Due to the less temporal aspect of mule deer use on the lease area, it is likely that fawning occurs on the lease area. No information is available on the location of mule deer fawning areas. Aerial survey results on mule deer distribution during winter and spring have been provided by MT DFWP and are available through the Guard Environmental Office.

Because mule deer are present on the area during all seasons, the potential for disturbance by training exercises exists. During winter months mule deer congregate in large groups and are nutritionally stressed. Disturbance at this time can have dramatic consequences to survivorship. However, during late spring, summer and fall, mule deer are widely distributed in small groups and are not nutritionally stressed. The wider distribution and lower density of mule deer observed during non-winter months would lessen both the number of displacements due to training and the potential impact on the individual animals. It should be noted that the areas which mule deer typically occupy would receive little vehicular traffic and the disturbance would be limited to incidental foot traffic by small units.

Forage (Browse) availability during winter months is limited to a few scattered shrub species on south slopes. Shrubs are distributed narrowly to swales, coulees and drainage bottoms where cattle have historically congregated and compete with deer for the existing browse species.

Summary on Mule Deer: 1) Mule deer use portions of the current lease area as winter range and as many as 170 mule deer have been observed during winter in the Blue Cloud-Cherry Creek area. The actual lease area serves as important winter range; however, projected training on the lease area would not occur during winter months in areas which would impact mule deer. 2) Unlike elk, mule deer use on the lease area occurs across all seasons; however, mule deer are widely distributed and at low density during non-winter months due to limited cover and forage availability. 3) The area does not provide security for mule deer during hunting season due to limited cover.

3.4.1.3 White-tailed Deer

White-tailed deer are found in the lower elevations of the lease area and along Sevenmile Creek. The Head Ranch is frequented by white-tailed deer and the stream course likely serves as travel corridor which links portions of agricultural land to the east (particularly the Green Meadow area) to more rural riparian habitats to the west. It is probable that some white-tail fawning occurs on portions of the Head Ranch, particularly the area in the eastern portion of the property where more vegetative cover exists.

3.4.1.4 Other Vertebrate Species

The Montana Natural Heritage Program conducted a data search to determine if any sensitive species had been reported for the lease area. This information is located in the Montana Army National Guard Helicopter Conversion Environmental Analysis dated September 1994. No records of sensitive species in the lease area were found. However, the results of the search should not be considered either definitive or as a substitute for on-site surveys.

In the absence of a systematic baseline survey of the existing lease area, a definitive list of the species using the area cannot be provided. It should be assumed that all species found to occur in equivalent habitats on adjacent public lands may occur on the existing lease area.

It is unknown which small mammals exist in the area; however, it should be assumed that species abundance is similar to that determined for similar, nearby sites where small mammal surveys have been conducted.

Raptors: No raptor nests were observed during a helicopter survey of the area on March 23, 1993.

Upland Gamebirds: Both sharptailed grouse and Hungarian partridge are known to occur on the existing lease area seasonally. Due to the limited cover and availability of preferred foods, upland gamebird use is limited to a few individuals/coveys.

Nesting cover does not exist on potential bivouac areas. This is due to a combination of factors: 1) The area is at relatively high elevation (> 4,000 ft); 2) Low rainfall (< 10 inches/year) limits vegetative production; 3) Soils are thin and rocky; 4) grazing by livestock has removed residual cover in all but the steepest terrain; 5) Small grain crops/preferred foods are absent or scarce within the general area.

3.4.1.5 Wildlife Use and Movement Along the Sevenmile Creek

A portion of Sevenmile Creek between the Scratchgravel Hills and Mount Helena serves as a travel corridor for deer, elk and coyote, and infrequently moose, black bear and mountain lion (communication, Gayle Joslin, wildlife biologist, MT DFWP). No quantitative information on use of Sevenmile Creek by individual species exists but it is reasonable to assume that the stream serves as an travel corridor to resident and transient wildlife. The value of wildlife corridors lies in allowing seasonal movement of species to and from different habitats. In the absence of such corridors, habitat which may be critical to a species survival becomes unavailable.

3.4.1.6 Hunting Season Access

The RV Ranch is a large, adjacent ranch which currently does not allow public hunting on the portion of the ranch adjacent to the existing lease area. The policy of other ranches on hunting access is unknown. If the Proposed Action area were implemented, no hunting would occur due to safety considerations attendant a range impact area. Public access would be allowed only with prior written permission from the Guard.

If the No Action Alternative were selected, it is expected that the existing, limited hunting access would continue.

3.5 WATER RESOURCES

3.5.1 Groundwater

Refer to Appendix A "Hydrogeology Addendum, Montana Army National Guard Fort Harrison Land Exchange, Helena, MT" prepared by PRC Environmental Management, Inc. for a detailed discussion of groundwater in the Fort Harrison area. The interested reader may also find a good description of the Helena Valley-fill aquifer system in "Hydrogeology of the Helena Valley-Fill Aquifer System, West-Central Montana" (U.S. Geological Survey, Water-Resources Investigations Report 92-4023 by David W. Briar and James P. Madison). This report is available through the Lewis and Clark Public Library, the U.S. Geological Survey's Helena office and is on file with the Guard Environmental Office.

3.5.1.1 Potential Impacts to Ground Water if the Proposed Action is Implemented

No change in the baseline conditions of groundwater would occur on the acquired land if the proposed action were implemented. However, if development of the Head Ranch were to occur in the future, the potential for an adverse impact to the aquifer exists. A discussion of the existing groundwater conditions in the Head Ranch vicinity is presented in Appendix A.

3.5.1.2 Potential Impact to Ground Water if the No Action Alternative is Implemented

The No Action Alternative would have an unknown potential to affect groundwater resources depending on the level of private development. The potential impact cannot be determined, but it is presumed to be insignificant given existing state and federal regulations which protect water quality.

3.5.1.3 Potential Impact to Ground Water if Alternative 3 - Land Swap with Gruber and RV Ranch, No Purchase of Jorgenson Property - is implemented

If Alternative 3 were implemented, no change in baseline groundwater conditions would occur on the acquired property. However, if development of the Head Ranch were to occur in the future, the potential for an adverse impact to the aquifer exists. A discussion of the existing groundwater conditions in the Head Ranch vicinity is presented in Appendix A. Some potential exists for impacts to ground water as a consequence of development of private land.

3.5.2 Surface Water

Refer to Appendix A "Hydrogeology Addendum, Montana Army National Guard Fort Harrison Land Exchange, Helena, MT" prepared by PRC Environmental Management, Inc. for a detail discussion of surface water in the Sevenmile Creek area. Regional surface waters include the Missouri River, Lake Helena and the four principle streams which flow into the Helena Valley. In the vicinity of Fort Harrison, the nearest stream is Sevenmile Creek which courses through the Head Ranch property (Figure 2). Sevenmile Creek flows into Ten Mile Creek which in turn flows into Lake Helena. Flow rates in Sevenmile Creek are dramatically reduced in summer as a result of irrigation diversion upstream. The Head Ranch has water rights of 125 miners inches of which 65 inches will be transferred to Mr. Frank Gruber and 60 inches to the RV Ranch,

MT Department of Fish, Wildlife and Parks Helena Area Fisheries Biologist Don Skaar, notes that historical fish surveys indicate that eastern brook trout, rainbow trout, white sucker, longnose sucker and mottled sculpin are found upstream of the Head Ranch property on Sevenmile Creek. Mr. Skaar suggested that it would not be surprising if young-of-the-year fry of all species re-colonize Sevenmile Creek in the area of the Head Ranch every spring from spawning areas upstream. These fish are killed during years that the creek is de-watered from irrigation diversion (Refer to FWP letter dated December 2, 1994, Appendix A).

3.5.2.1 Impacts to Surface Water if the Proposed Action is Implemented

If the Proposed Action were implemented, the Head Ranch would be transferred to private ownership. Sevenmile Creek runs through the Head Ranch property. The impact of the Proposed Action on Sevenmile Creek is dependent upon future uses of the land. It is unknown if future development would occur on the Head Ranch. Should development occur, adverse impacts to the stream bank along Sevenmile Creek could occur if the county fails to impose a setback requirement from the creek. The potential impact to the stream may be mitigated by county restrictions and state regulations relating

to construction in a floodplain. If the Proposed Action is implemented, potential impacts to Sevenmile Creek cannot be assessed since Mr. Gruber has made no plans for development.

3.5.2.2 Impact to Surface Waters if the No Action Alternative is Implemented

No change in existing surface water conditions on Sevenmile Creek would occur if the No Action Alternative were implemented.

3.5.2.3 Impact to Surface Waters if Alternative 3 - Land Swap with Gruber and RV Ranch, No Purchase of Jorgenson Property - is Implemented

Impacts would be the same as the Proposed Action.

3.5.3 Water Quality

Well tests have been accomplished down gradient of Fort Harrison by the USGS and by the Guard. A total of seven wells down gradient of Fort Harrison were tested in June of 1994. Well depth varied from 209 feet to 30 feet. All seven wells were tested for volatile organic compounds (VOC's) and all wells were negative for the presence of VOC's. Four of the seven wells were also tested for metals and cyanide and were found below the detection limits for both. In addition to VOC's, Metals, and cyanide, the well at the Up Country Inn was tested for nitrates. Results indicated nitrates were within normal limits.

3.5.3.1 Impacts to Water Quality if the Proposed Action is Implemented

No change in baseline ground water quality would occur if the Proposed Action were implemented. Surface water quality of Sevenmile Creek could be adversely impacted if development were to be poorly regulated and if no setback requirements were stipulated by the developer so as to minimize impact to surface waters of Sevenmile Creek.

3.5.3.2 Impacts to Water Quality if the No Action Alternative is Selected

No change in baseline water quality would occur on Sevenmile Creek. Ground water quality could be impacted by development on private lands; however, this possibility seems remote given the type of development anticipated on private lands.

3.5.3.3 Impacts to Water Quality if Alternative 3 - Land Swap with Gruber and RV Ranch, No Purchase of Jorgenson Property - is Implemented

Impacts to water quality would be the same as those described if the Proposed Action were implemented.

3.6 CULTURAL RESOURCES

3.6.1 Head Ranch

Gar C. Wood and Associates of Loma, MT was contracted to complete an archeological survey of Fort Harrison and the Head Ranch. Field work was accomplished from October 1992 to June of 1993. A detailed report of his findings is available for review in the Command Historian's office of the Guard.

There are five historic sites located on the Head Ranch. Site 24LC122 is the complex of seven buildings (five still standing) which served as the ranch headquarters. This site is located along Head Lane (Figure 2) and occupies 3.3 acres which will remain under the control of the Montana Army National Guard.

Sites 24LC1135 and 24LC1136 are abandoned and dismantled farmsteads. Both sites lack standing structures but may be associated with the historic Head Ranch. Site 24LC1138 is a possible placer mine location. The placer mine lacks standing structures and is undated. Site 24LC1137 is a reclaimed dump which may be associated with the historical Head Ranch.

There are two prehistoric sites located on the Head Ranch property. Site 24LC121 is a prehistoric occupation site and site 24LC707 has seven stone circles or tepee rings. Three of the seven tepee rings are located on the Head Ranch, the remainder are on public land administered by the BLM.

The Guard has recently formed a Historic Preservation Committee consisting of military and civilian members. Technical expertise is provided by the State Historical Preservation Office. The function of this committee is to evaluate the Proposed Action with respect to impacts to cultural resources. The committee is also tasked with evaluating the historic ranch property with respect to eligibility for listing on the National Register. This determination will be made in accordance with Section 106 of the National Historic Preservation Act of 1966. The committee will fulfill its charter responsibilities regardless of which alternative of the three listed in the EA is selected.

3.6.2 Potential Impacts to Cultural Resources if the Proposed Action is Implemented

No adverse impacts to cultural resources would occur if the proposed action were implemented. Baseline cultural resources inventories of the Head Ranch indicate no historically important structures or buildings are present on the property nor are there potentially important archeological sites.

If the proposed action were implemented, a cultural resource inventory of the newly acquired property would be scheduled as soon as funds become available from National Guard Bureau. No change in the existing baseline conditions would occur on the acquired property and thus no potential exists for any adverse impact exists.

3.6.3 Potential Impacts to Cultural Resources if the No Action Alternative is Implemented

Under the No Action Alternative, the Head Ranch would remain undeveloped and current baseline conditions would persist. No historically significant buildings or structures appear to exist within the current lease area; however, a systematic cultural resource inventory of these private lands has not been accomplished. As previously noted, it is likely that some level of development would occur in the near term on the Gruber property should the No Action Alternative be selected. The extent of development coupled with the potential for archeological sites would ultimately determine the potential impact to cultural resources if this alternative were selected. Neither the level of development nor the potential for archaeologically important sites is known.

3.6.4 Potential Impacts to Cultural Resources if the Alternative 3 - Land Swap with Gruber and RV Ranch, No Purchase of Jorgenson Property - is Implemented

The potential impacts to cultural resources on Head Ranch would be the same as described in the Proposed Action. No change in baseline cultural resources would occur on the Gruber property if Alternative 3 were selected. The potential for impacts to cultural resources on adjacent private lands within the current lease area is unknown for the reasons stated in the 3.6.3 above.

3.7 HAZARDOUS MATERIALS/WASTE MANAGEMENT

Currently Fort Harrison is classed as a small quantity generator (generates <2,000 lbs/month of HW) under 40 CFR 261 and 16.44.401 Administrative Rules of Montana (ARM). The EPA registration number is MT 8211830080. All hazardous materials and hazardous waste are handled in accordance with applicable state, federal and Army regulations. Transport of hazardous materials and hazardous waste

is accomplished by trained Guard personnel in accordance with Department of Transportation regulations (49 CFR 171-180 and 300 et seq.). Fort Harrison is registered as a Transporter under its EPA I.D. number. Disposition and disposal of hazardous materials and waste is coordinated through the Defense Reutilization and Marketing Office (DRMO) located at Malmstrom Air Force Base, Great Falls, Montana.

Used oil is managed for energy recovery burning at three Guard sites. Internal management policies and procedures are governed by DMAMT Regulation 200-7 in accordance with 40 CFR 279.1 et seq. The Guard is registered as a Used Oil Marketer under its EPA registration for purposes of storage, record keeping and reporting requirements.

On site storage of hazardous waste and special waste occurs. Hazardous waste storage occurs in approved satellite storage areas and in a RCRA-conforming storage building with appropriate secondary containment and security. Used petroleum, oils and lubricants (POL) destined for energy recovery or recycling are stored in 55 gallon drums on secondary containment pallets. All storage areas for hazardous wastes, antifreeze and used POL products are routinely inspected per applicable regulations found in 40 CFR 265 and 16.44.415 ARM.

3.7.1 Installation Restoration Program

A Preliminary Assessment (PA) of Fort Harrison was completed in July of 1993 by Argonne National Laboratory. The PA identified six sites as being environmentally significant (i.e., having the potential to threaten human health and the environment). A Site Investigation (SI) will be conducted during the spring and summer of 1995 in order to determine if collectively or individually, the sites identified as environmentally significant pose a threat to human health and the environment and to propose appropriate actions to protect human health and the environment.

3.7.2 Potential Impacts on the Generation of Special and Hazardous Waste if the Proposed Action is Implemented.

No change in the current level of waste generation will occur if the proposed action is implemented.

3.7.3 Potential Impacts on the Generation of Special and Hazardous Waste if the No Action is Implemented.

If the No Action alternative is selected, the potential exists for development inside the surface danger zone of existing firing ranges. If such development occurs, the affected ranges would shut down. A reduction in live-fire training would not change the current level of waste generation at Fort Harrison. Almost all special and hazardous waste is generated from vehicle maintenance

shops on the Fort. Current maintenance operations are independent of existing small arms training levels at Fort Harrison.

3.7.4 Potential Impacts on the Generation of Special and Hazardous Waste if Alternative 3, 4 or 5 is Implemented.

No change in the current level of waste generation would occur if any one of these three alternatives is implemented.

3.8 SOCIOECONOMICS

3.8.1 Employment and Income

A discussion of employment and income in Lewis and Clark County may be found in the EA of the Montana Army National Guard Helicopter Conversion, Helena Regional Airport.

As noted previously, approximately 170 employees work full-time at the Fort Harrison complex in various administrative, training and maintenance functions. A 1994 survey found that there were 662 Montana National Guardsmen (fulltime and traditional) in Lewis and Clark County. Using FY94 payroll figures for full-time employees and an average pay for traditional Guardsmen, the total National Guard pay in Lewis and Clark County amounted to $17,849,964.

3.8.1.1 Potential Impacts to Employment and Income if the Proposed Action is Implemented.

No change in baseline employment conditions would occur if the proposed action were implemented.

3.8.1.2 Potential Impacts to Employment and Income if the No Action Alternative is Selected.

Should existing training opportunities be significantly curtailed, the impact to operations and employment on Fort Harrison is unknown, but potentially highly adverse. It is unlikely that more that a few employees would be impacted in the short-term (1-3 years) by closure of firing ranges or loss of other training opportunities at Fort Harrison.

An immediate adverse impact to the Helena area economy would occur once the live-fire ranges at Fort Harrison shut down. This adverse economic impact would occur because military units which normally travel to Fort Harrison for training would be unable to meet their annual requirement for small arms training and qualification. Rather than send troops to an installation where only part of their annual training requirement can be met, commanders would send their troops to installations with all the required training facilities.

Despite ideal conditions for Extreme Cold Weather Training (ECWT) for Army Special Forces, these specialized troops would likely

choose to train elsewhere if no live-fire training were available at Fort Harrison. Weapons qualification in extreme cold weather is an essential element of their winter training. Table 3.8 provides a cost breakdown of funds expended by 2d Special Forces Battalion, 10th Special Forces Group (Airborne) from Fort Carson, Colorado. This exercise involved around 350 soldiers.

Table 3.8 Estimated amount of money spent by 2d Battalion 10th Special Forces Group (Airborne) personnel in the local Helena economy during the period of 10 January - 8 March 1995

ITEM	DOLLARS
Ski tickets	19,000
Bus rental/contract	6,200
Passenger vehicle rental	10,200
Fuel, (local purchase)	4,500
Fuel, Fort Harrison	3,000
Fuel, aviation	12,000
Aviation hanger rental	3,000
Repair parts, Fort Harrison	2,700
Repair parts, (local purchase)	2,900
Telephone contracts	2,100
Copier contract	2,000
Self-Service Supply Center (SSSC)	1,300
Food (local purchase)	90,000
Operational items (local purchase)	10,000
Airline tickets/hotels	6,000
Personal demand/recreation	24,000
TOTAL	198,900

In addition to Battalion-level training exercises, training by Special Forces companies also occurs on routine basis. The companies are normally between 30 and 50 soldiers in size. In a typical year, between four and six companies train in Helena from two to four weeks.

3.8.1.3 Potential Impacts to Employment and Income if Alternative 3 is Selected.

Potential impacts to employment and income would be the same as those if the Proposed Action is selected.

3.8.2 Population, Housing, and Other Community Services

A discussion of population, housing and other community services in Lewis and Clark County may be found in the EA of the Montana Army National Guard Helicopter Conversion, Helena Regional Airport.

3.8.2.1 Potential Impacts to Population, Housing and Other Community Services if the Proposed Action Is Implemented.

If the Proposed Action is implemented, some development would occur on the Head Ranch property while no development would occur on either the Jorgenson or Gruber property acquired by the Guard. It is anticipated that any development on the Head Ranch would occur in accordance with existing county planning ordinances and in accordance with state subdivision regulations. It is unknown what, if any impact such development could have on community services; however, it seems reasonable to say that the impact would be small given the limited acreage involved.

3.8.2.2 Potential Impacts to Population, Housing and Other Community Services if the No Action Alternative Is Implemented.

If the No Action Alternative is selected, some development of private lands currently under temporary lease agreement to the Guard could occur. It is reasonable to assume that this development would occur within the next 2-3 years on the Gruber property. The level of development is unknown; however, it is presumed that it would be in accordance with existing county planning ordinances.

4.0 MITIGATION OF THE PROPOSED ACTION

The Proposed Action, if implemented, would result in no changes to the existing environment on 1,209 acres of land acquired by the United States. On the 664 acres of land proposed for transfer from federal to private ownership, some unknown potential for development exists. It is anticipated that no development would occur in the near term on the 664 acres of the Head Ranch based on conversations with Mr. Gruber and RV Ranch. However, the potential for some development, consistent with state and local laws and regulations, remains.

The acquisition of 1,209 acres by the United States would ensure that open space and wildlife habitat on these lands is protected into the future. Approximately twice the acreage of land in the Fort Harrison vicinity would be protected from potential development over that afforded under the No Action Alternative.

Throughout this EA, the potential for some development on the Head Ranch has been recognized. In the absence of any information on the potential level of development (if any) of the Head Ranch, it is unproductive to attempt to discuss mitigative measures. If the Proposed Action is implemented, the state and county would exercise regulatory oversight on any proposal for the land different from its existing use. County and state government, not the Guard, would have the authority to mandate mitigative measures.

FIGURES

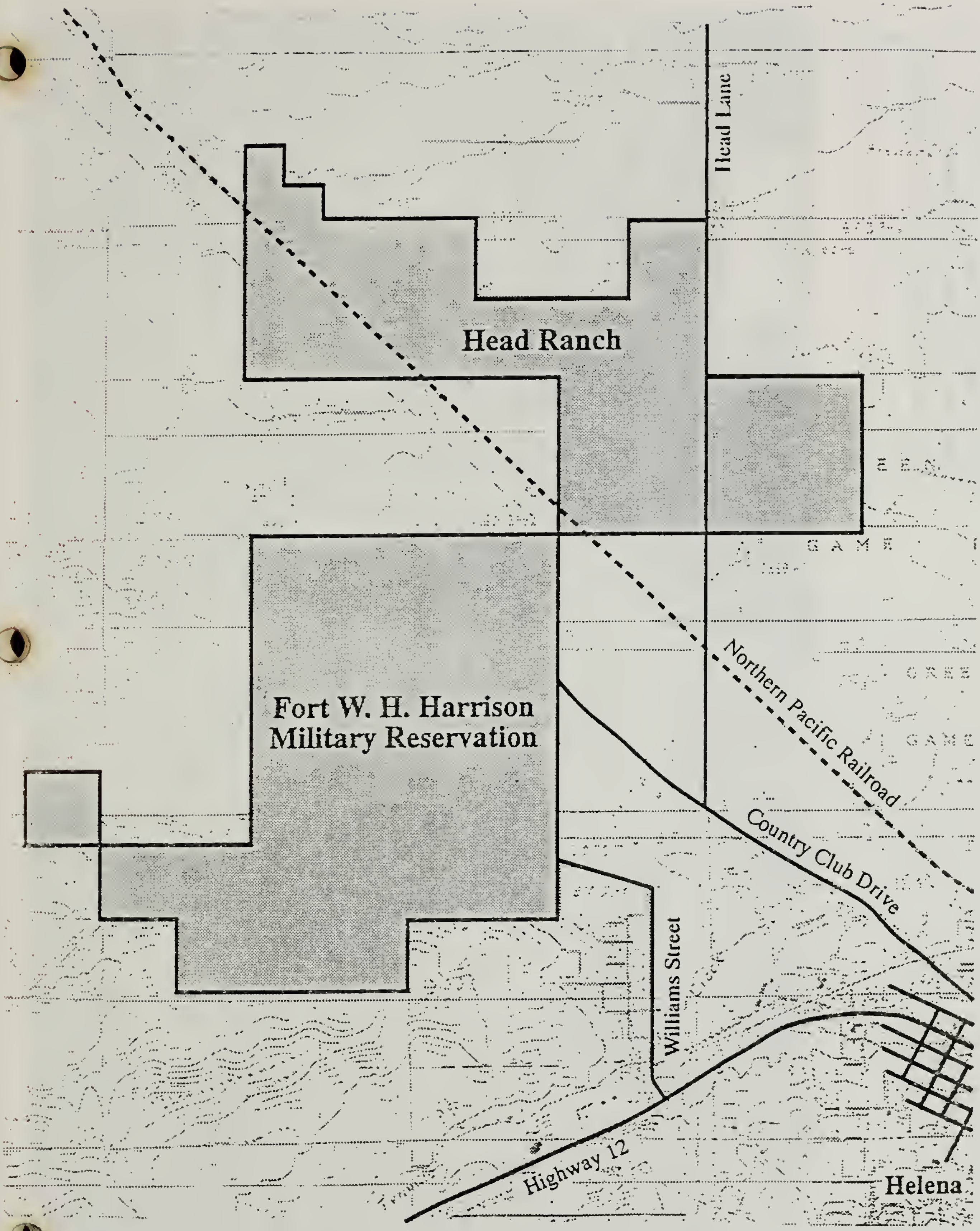

Figure 1.
Site location - Fort Harrison and surrounding area.
Lewis and Clark County Montana.

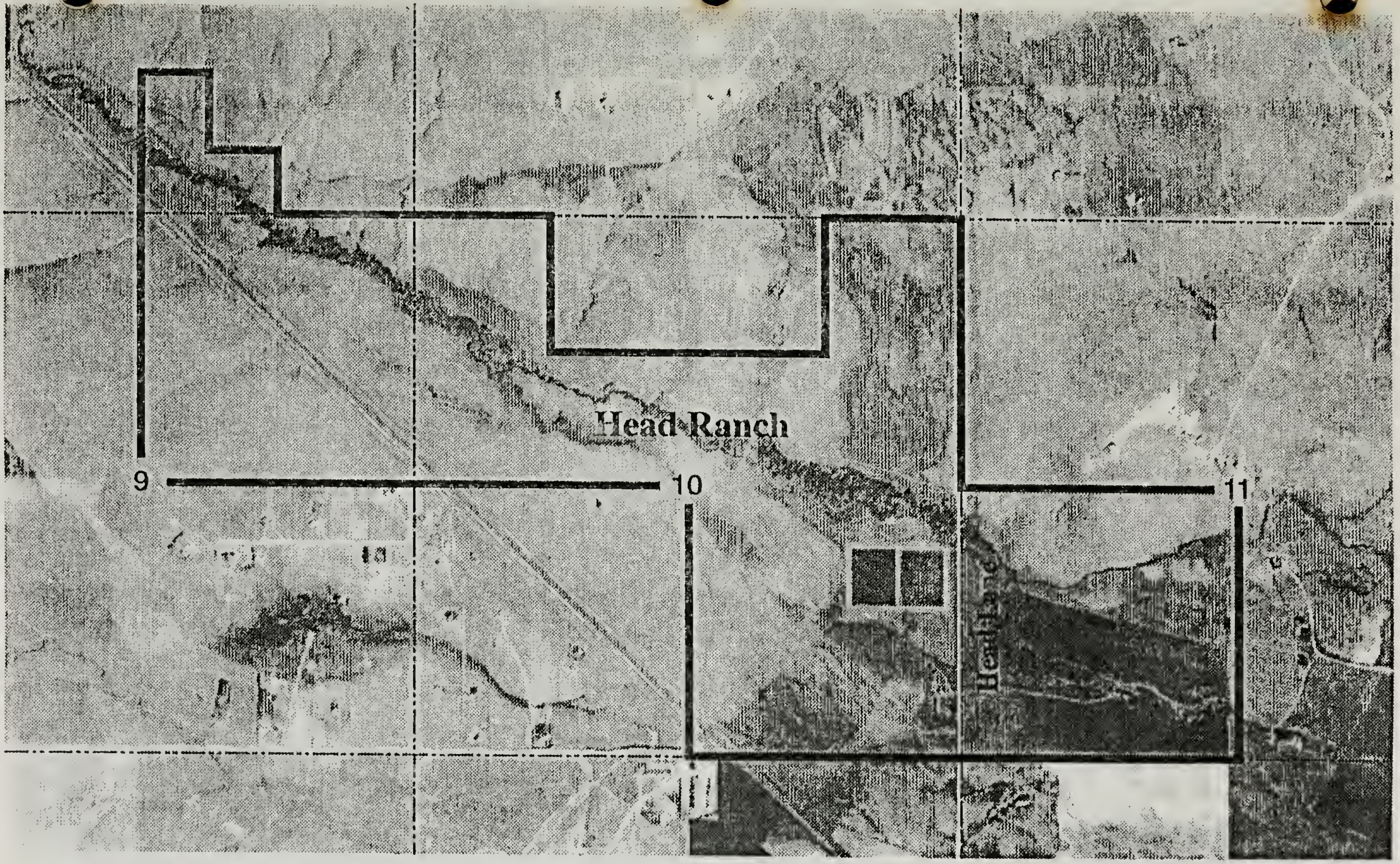

Figure 2.
Head Ranch Location. Boundaries of Head Ranch are highlighted. Lewis and Clark County, Montana 1994

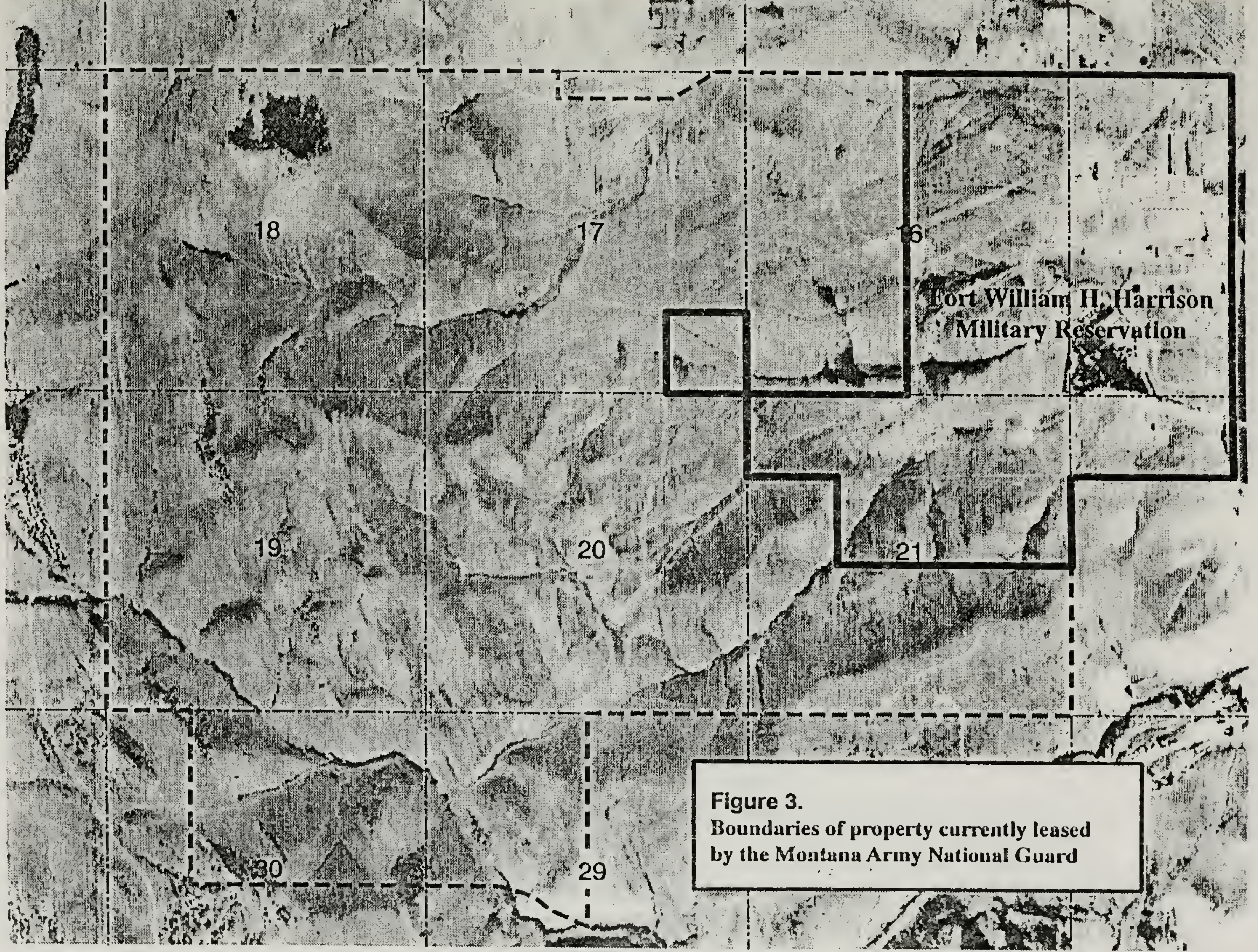

Figure 3.
Boundaries of property currently leased by the Montana Army National Guard

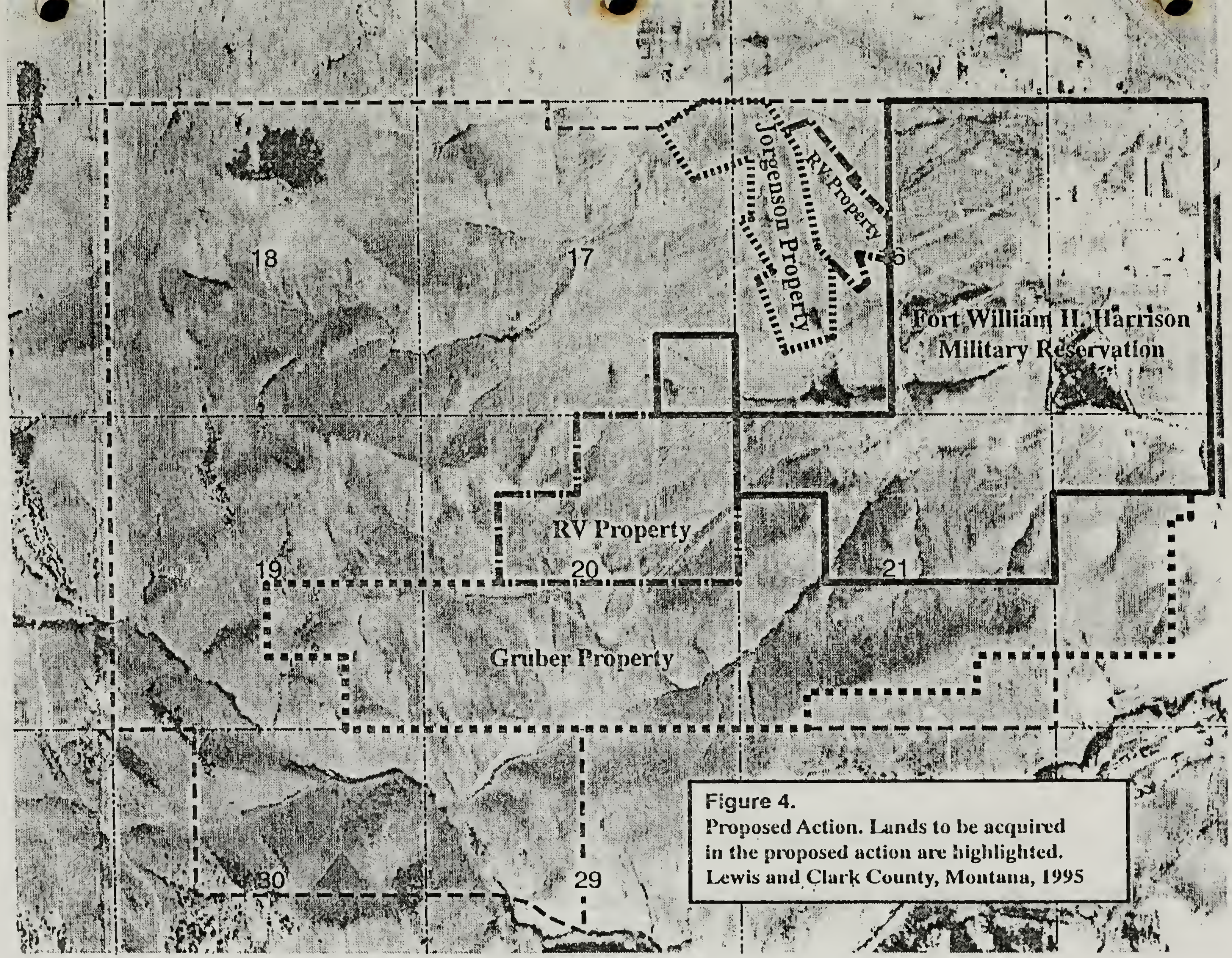

Figure 4.
Proposed Action. Lands to be acquired in the proposed action are highlighted.
Lewis and Clark County, Montana, 1995

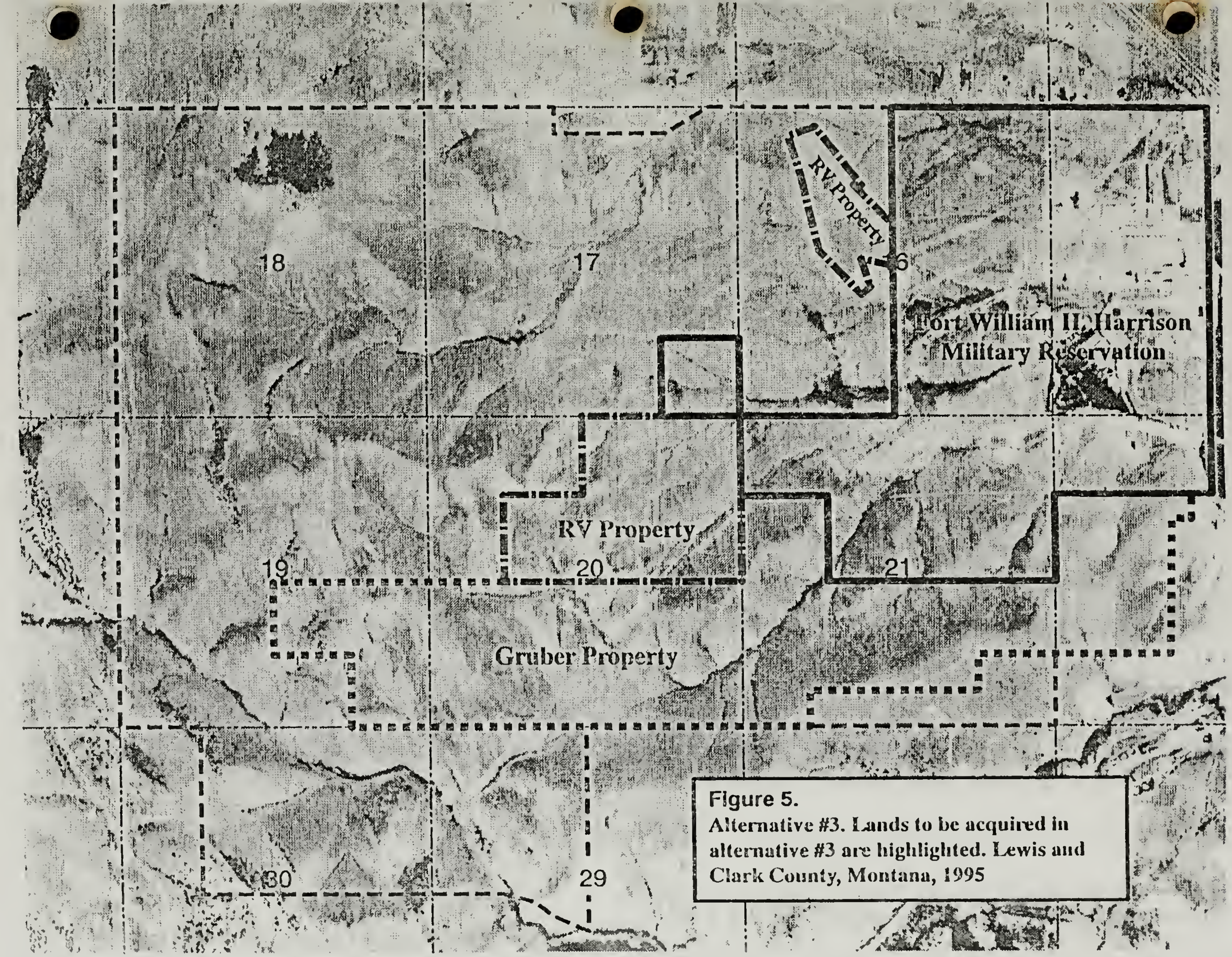

Figure 5.
Alternative #3. Lands to be acquired in alternative #3 are highlighted. Lewis and Clark County, Montana, 1995

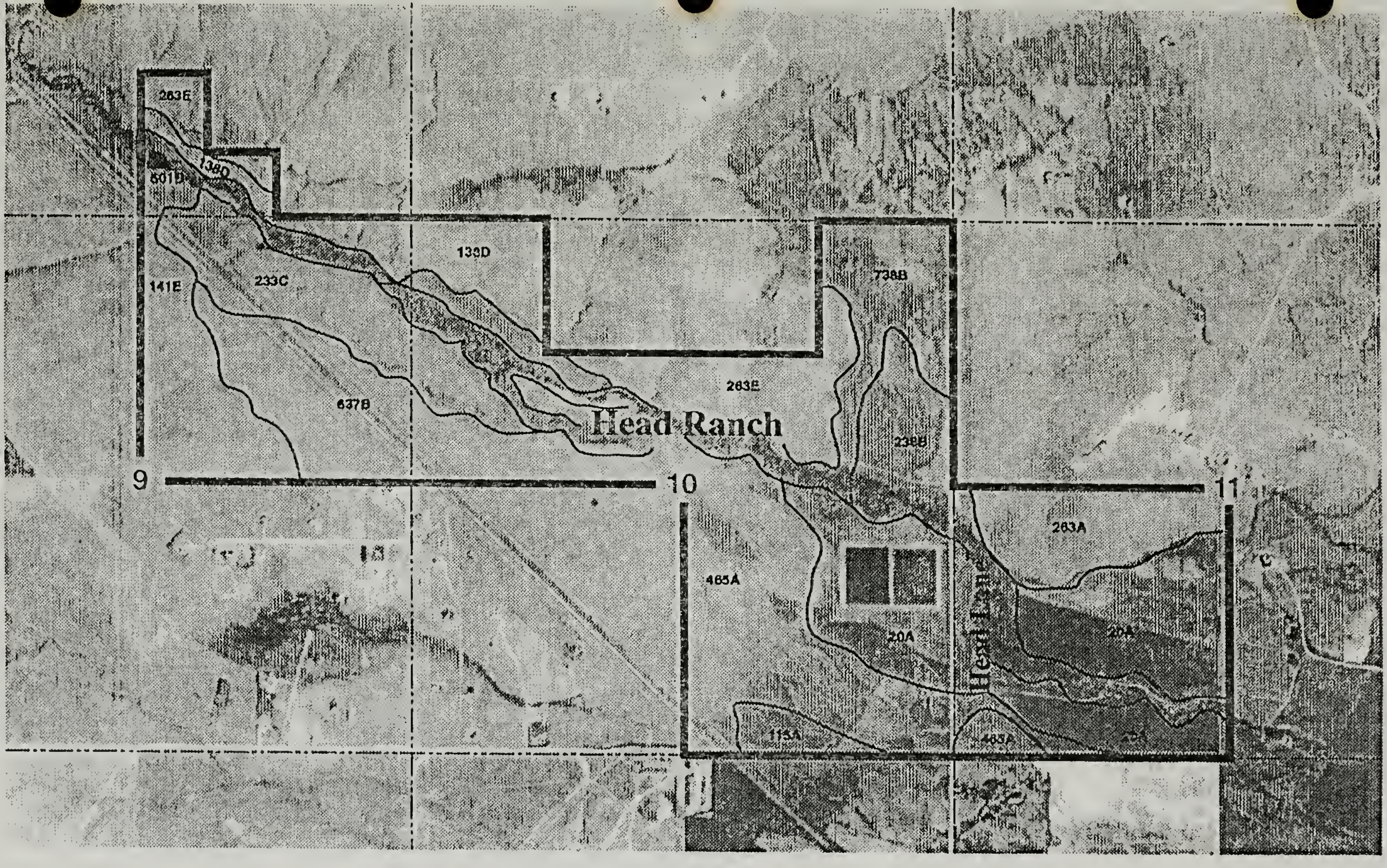

Figure 6.
Soil types at the Head Ranch.

[illegible]

APPENDIX A

HYDROGEOLOGY ADDENDUM
MONTANA ARMY NATIONAL GUARD
FORT HARRISON LAND EXCHANGE
HELENA, MONTANA

Prepared for:

Montana Army National Guard
Fort Harrison
Helena, Montana 59601

Prepared by:

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(406) 442-5588

June 6, 1995

Customer satisfaction is important to PRC. We would appreciate your feedback on the quality of PRC's professional consulting services and work products. Please call us collect at (406) 442-5588 to express your opinions or concerns.

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A HELENA AREA ANNUAL PRECIPITATION - 1964 THROUGH 1994
B SEVEN MILE CREEK SYNOPTIC STREAMFLOW MEASUREMENT DATA IN CUBIC FEET PER SECOND
C WATER LEVEL HYDROGRAPHS OF PRIVATE WELLS

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4 CROSS SECTION C-C' 8

1.0 INTRODUCTION

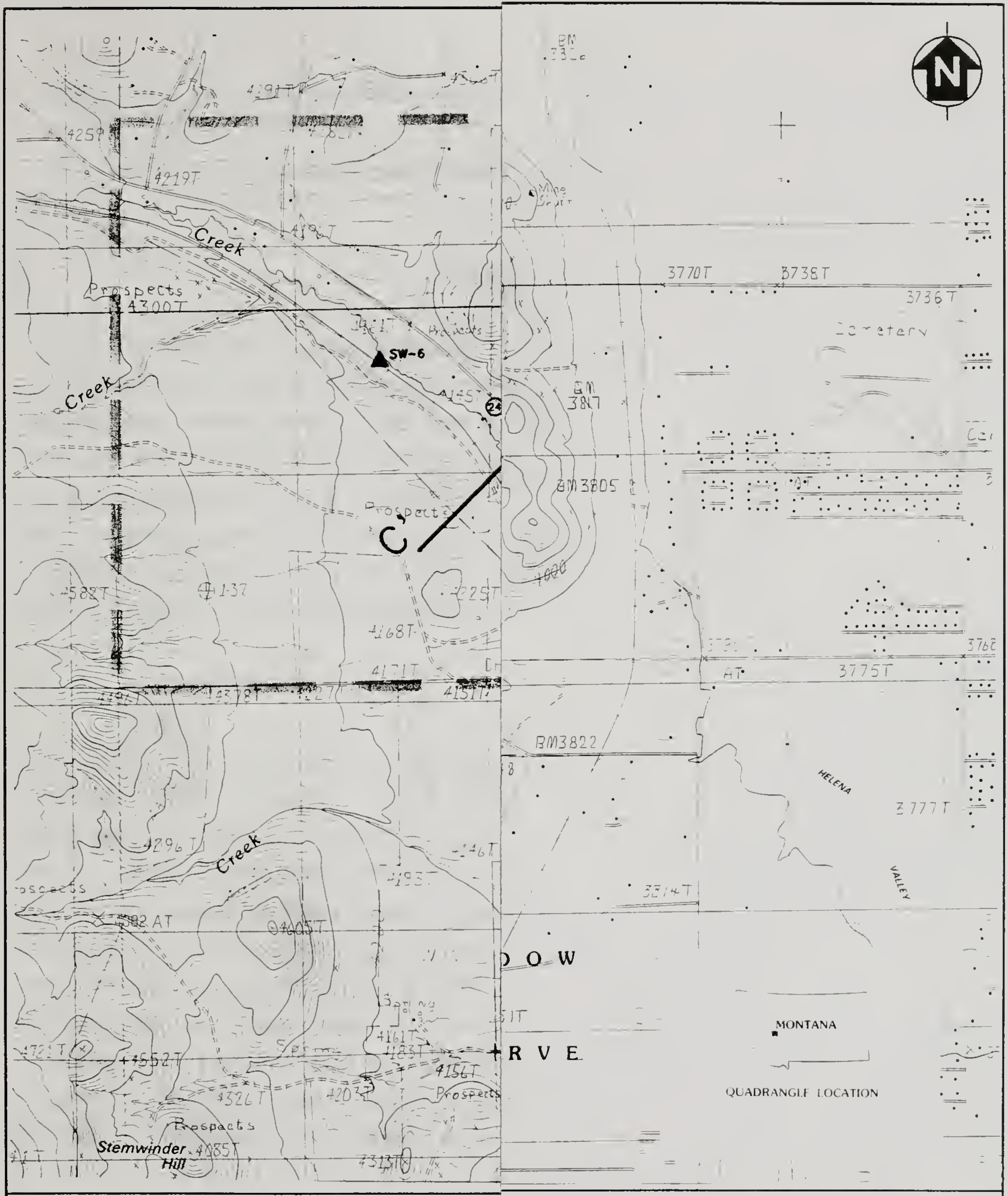
The Montana Army National Guard (MT ARNG) requested that PRC Environmental Management, Inc. (PRC) conduct a hydrogeological assessment of surface water and groundwater conditions in the vicinity of the Head Ranch located along Seven Mile Creek and north of the Fort William Henry Harrison (Fort Harrison) complex (Figure 1). The purpose of this addendum is to provide additional water resource information related to the proposed Fort Harrison land exchange described in the environmental assessment (EA) (MT ARNG 1994). The EA evaluates the potential impacts of the transfer of 664 acres of federally owned property north of the Fort Harrison complex along Seven Mile Creek (known as the Head Ranch) with 1,099 acres of privately owned land currently leased by the MT ARNG. This addendum contains expanded geologic and hydrogeologic information needed for the land exchange. In addition, this document was prepared as a stand alone document that is intended to be used in conjunction with the EA, and for other projects as deemed necessary by the MT ARNG. The focus of this hydrogeological assessment is the Head Ranch. Hydrogeology of the privately owned land involved in the possible exchange is not evaluated since its future use would not differ from its current use as a live fire range.

The following sections provide the project objectives and discussion related to background information, surface water resources, groundwater resources, and evaluation of potential impacts to water resources.

1.1 PROJECT OBJECTIVES

Project objectives include:

- Characterize the hydrogeologic conditions in the vicinity of the Head Ranch
- Evaluate surface water and groundwater interaction upgradient and within the Head Ranch



WELL OWNERS

- ① POWELL
- ② BUSWELL
- ③ WEST
- ④ DONOVAN
- ⑤ KERR
- ⑥ LERUM#2
- ⑦ LERUM#1
- ⑧ NORTON
- ⑨ LOVELY
- ⑩ WINSCOTT
- ⑪ McALPINE
- ⑫ HAMILTON
- ⑬ NOVOTNE
- ⑭ ANDERSON
- ⑮ HELLHAKE
- ⑯ CLARK
- ⑰ DECKER
- ⑱ ELLIOT
- ⑲ DELP
- ⑳ NORGAAR

0

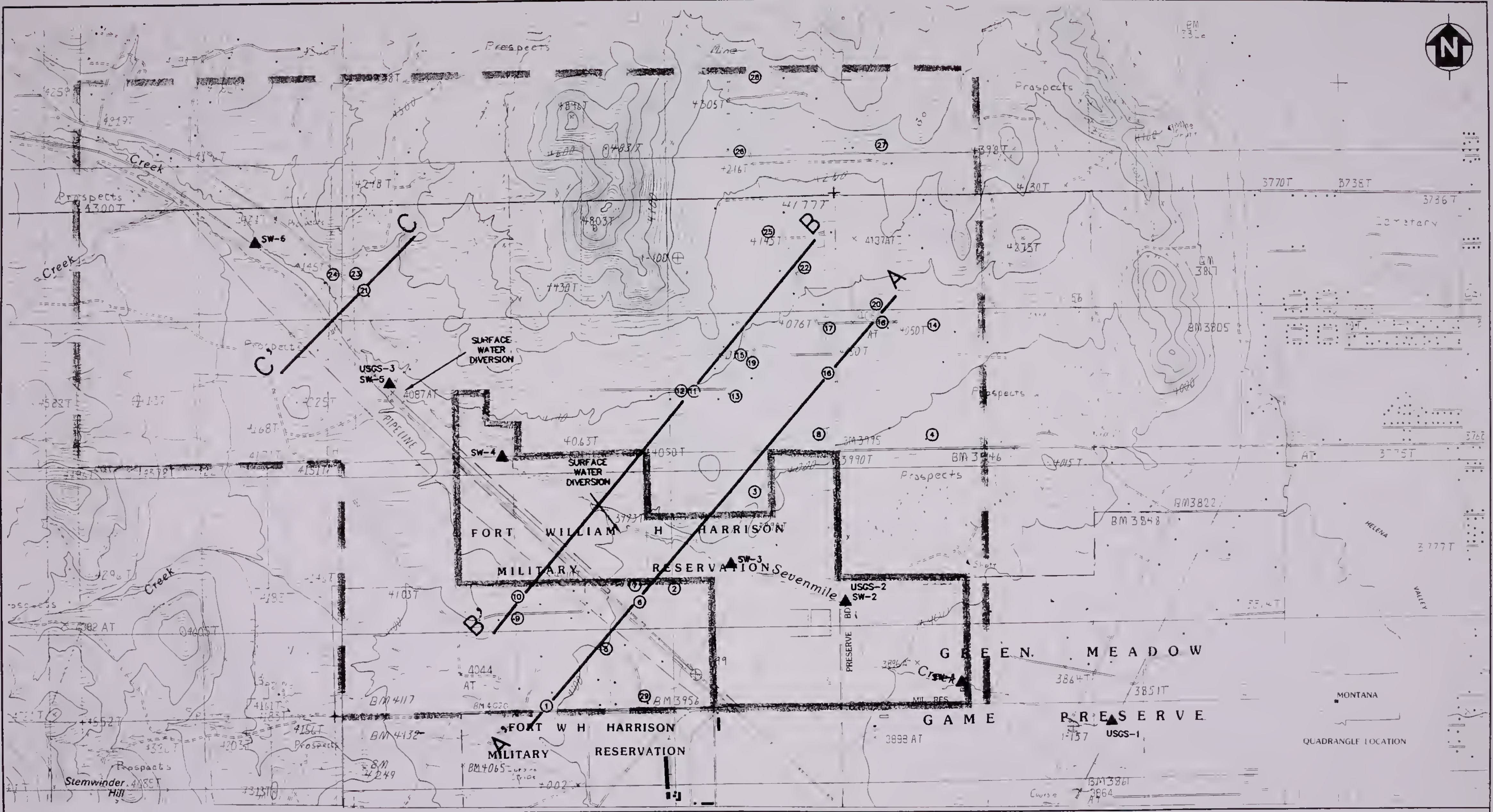
FEET

SOURCE: MODIFIED FROM USGS, 1985

FORT HARRISON HEAD RANCH
HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 1
LOCATION MAP

PRC ENVIRONMENTAL MANAGEMENT, INC.



WELL OWNERS

① POWELL
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⑦ LERUM#1
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⑨ LOVELY
⑩ WINSCOTT
⑪ McALPINE
⑫ HAMILTON
⑬ NOVOTNE
⑭ ANDERSON
⑮ HELLHAKE
⑯ CLARK
⑰ DECKER
⑱ ELLIOT
⑲ DELP
⑳ NORGAARD
㉑ PETERSON
㉒ SCARR
㉓ MORRIS
㉔ OLSON
㉕ WOODEN
㉖ SHIELDS
㉗ BOREEN
㉘ MAULORICA
㉙ WINDLE

SOURCE: MODIFIED FROM USGS, 1985

▲SW-6 – SURFACE WATER FLOW MEASUREMENT STATION
▬ – HEAD RANCH BOUNDARY
▬ ▬ – PROJECT BOUNDARY

SCALE 1:24000

1 MILE 1/2 0

1000 0 1000 2000 3000 4000 FEET

SCALE 1"=2,000'

FORT HARRISON HEAD RANCH
HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 1
LOCATION MAP

PRC ENVIRONMENTAL MANAGEMENT, INC.

- Assess groundwater recharge characteristics within, and adjacent to, the Head Ranch
- Summarize potential impacts to water resources for the proposed land exchange

2.0 BACKGROUND

The EA (MT ARNG 1994) describes the proposed land exchange; alternatives to the proposed land exchange; potential cumulative future actions associated with the land exchange; and evaluation of environmentally significant media, cultural resources, hazardous materials and waste management, and socioeconomics associated with the proposed land exchange. The MT ARNG reviewed the draft EA and comments on the draft EA were received from federal agencies, state and local government, and private parties. Based on this review, the MT ARNG proceeded with preparation of this addendum to expand the water resources section of the EA and provide additional discussion on water resources related to concerns raised by respondents.

2.1 PROBLEM STATEMENT

The purpose of the land exchange is to consolidate federal holdings so that the existing live-fire ranges and training areas on the Fort Harrison complex remain useable in the future. Currently, the safety fans for all existing live-fire ranges at Fort Harrison extend onto private lands that are leased by the MT ARNG from Mr. Frank Gruber. Due to suburban residential expansion in the Helena Valley, encroachment of residential development around Fort Harrison could eventually result in the loss of the safety fan currently under private ownership and leased to the MT ARNG. The development of this private land would compromise the integrity of the existing live-fire range safety fans and would require the permanent closure of these ranges. Insufficient federal land exists at Fort Harrison to allow relocation of the live-fire ranges to other areas of the fort. As a result of this situation, the MT ARNG proposed a land exchange of the 1,099 acres of privately owned land leased by the MT ARNG in return for the 664 acres of federal property known as the Head Ranch.

- Assess groundwater recharge characteristics within, and adjacent to, the Head Ranch
- Summarize potential impacts to water resources for the proposed land exchange

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The purpose of the land exchange is to consolidate federal holdings so that the existing live-fire ranges and training areas on the Fort Harrison complex remain useable in the future. Currently, the safety fans for all existing live-fire ranges at Fort Harrison extend onto private lands that are leased by the MT ARNG from Mr. Frank Gruber. Due to suburban residential expansion in the Helena Valley, encroachment of residential development around Fort Harrison could eventually result in the loss of the safety fan currently under private ownership and leased to the MT ARNG. The development of this private land would compromise the integrity of the existing live-fire range safety fans and would require the permanent closure of these ranges. Insufficient federal land exists at Fort Harrison to allow relocation of the live-fire ranges to other areas of the fort. As a result of this situation, the MT ARNG proposed a land exchange of the 1,099 acres of privately owned land leased by the MT ARNG in return for the 664 acres of federal property known as the Head Ranch.

2.2 PHYSIOGRAPHIC DESCRIPTION AND CLIMATE DATA

The Head Ranch is located on the western edge of the Helena Valley and within the Seven Mile Creek drainage basin. Surface water in Seven Mile Creek flows generally west to east and is bounded by low hills to the south and the higher Scratchgravel Hills to the north. The drainage basin is within the relatively drier eastern side of the continental divide. The drainage bottom within the project area is relatively flat with two discernable sets of stream terraces, about 3 to 5 feet high, paralleling the creek drainage. In the northwest portion of the project area, the Seven Mile Creek stream valley is bounded by bedrock on both sides and contains relatively thin unconsolidated alluvial deposits. The lower portion of the stream flows within a wider, thicker, alluvial plain. Within the Head Ranch, the stream is incised 10 to 15 feet in places with steep banks and numerous small meanders in the finer-grained alluvium. Several large beaver dams have ponded the stream at several locations. Thick vegetation is common on the streambanks along the entire length of Seven Mile Creek within the Head Ranch. A stream diversion channel, approximately one-quarter mile above the west end of the Head Ranch, diverts water to the Sunny Vista subdivision area. A smaller diversion is located within the Head Ranch and appears to be used to irrigate pasture.

Helena area precipitation amounts from 1964 through 1994 are shown graphically in Attachment A. Overall, the Helena Valley has a semiarid climate. Average annual precipitation is about 11 inches at the Helena Regional Airport (United States Geological Survey [USGS] 1992) with increasing annual precipitation at higher elevations. May and June typically have the greatest amount of monthly precipitation and account for about one-third of the annual precipitation. Air temperature can vary significantly with winter lows of -30°F to summer highs of 100°F. The Head Ranch climate is probably similar to the climate at the Helena Regional Airport. Based on vegetation and elevation, the Scratch Gravel Hills receive more precipitation than the Seven Mile Creek stream bottom.

2.3 GENERAL GEOLOGIC AND HYDROLOGIC CONDITIONS

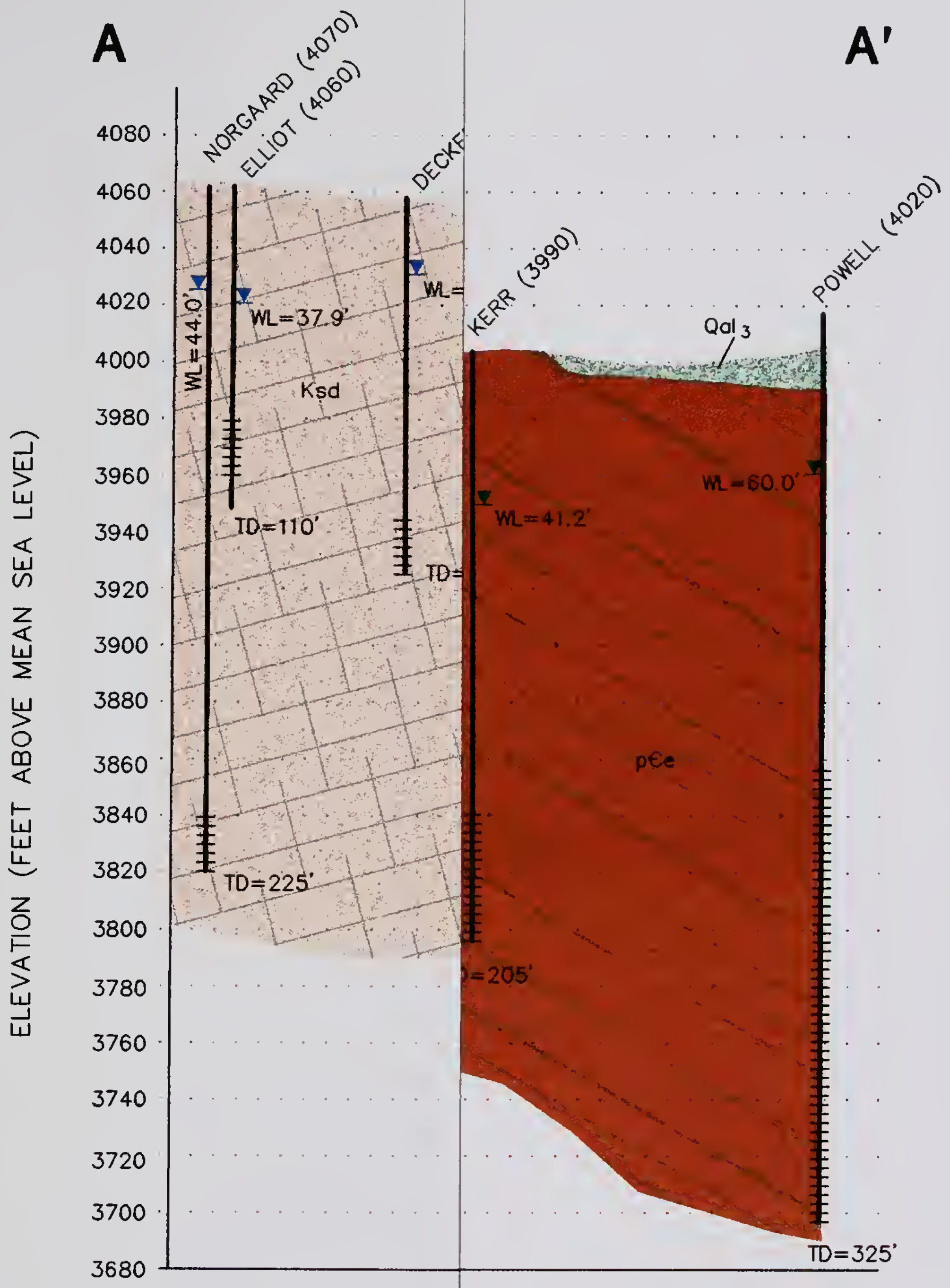
This section briefly describes geologic and hydrogeologic conditions of the project area and is based on reports published the USGS, James Montgomery Engineers, and drillers logs of private wells obtained from the Montana Department of Natural Resources and Conservation (DNRC), Water Rights Bureau.

Surface or near surface bedrock is common in the vicinity of the Head Ranch. Understanding bedrock conditions is important to characterize the hydrogeology in the vicinity of the Head Ranch. Conceptually, the topographic rises that bound Seven Mile Creek in the project area are bedrock consisting of Precambrian Belt Supergroup metasedimentary formations on the south and intrusive Precambrian gabbro or cretaceous syenodiorite formations of the Scratchgravel Hills on the north. Some geologic variability exists within the project area based on published reports, field observations, and well logs. However, for the purposes of this addendum, a simplified conceptual model is sufficient to meet the project objectives. Figures 2 through 4 are cross sections showing the general geologic conditions of the area. The cross sections show the relationship of bedrock to alluvium in the vicinity of the Head Ranch.

Bedrock not exposed is generally covered by a thin veneer of unconsolidated alluvium or slope wash up to 20 feet thick in the vicinity of the Head Ranch. Alluvial deposits appear to become significantly thicker east toward the Helena Valley, and to a lesser degree, south toward the Fort Harrison complex. The gabbro and granitic intrusives of the Scratchgravel Hills rise relatively abruptly immediately north of Seven Mile Creek to an elevation of 5,252 feet above mean sea level. Groundwater within the Scratchgravel Hills bedrock originates from precipitation within the higher areas of the hills. Within the syenodiorite bedrock, the combination of weathering and jointing has created sufficient pore space to allow the presence of a shallow aquifer (Wetzel and Hanneman 1983). Additionally, the bedrock may be a source of groundwater recharge to the alluvial deposits of the Helena Valley.

The low hills south of Seven Mile Creek consist of Precambrian Belt Supergroup metasedimentary formations. Alluvial and slope wash deposits covering the Belt rock generally thicken to the east and south. These hills are not likely a significant source of groundwater recharge to the Seven Mile Creek alluvium since they are without significant elevation gain. Bedrock in the area south of Seven Mile Creek probably receives recharge from the highlands to the west. The Belt Supergroup rock types observed in the project area are mostly green, red, and tan argillites, and feldspathic quartzites (compressed mudstone, siltstone, and sandstone).

Within the Seven Mile Creek stream valley, the alluvium is interpreted to be relatively thin, about 20 to 30 feet thick, and underlain by the Belt Supergroup rocks. Older stream valley deposits parallel to



ROM USGS TOPOGRAPHIC MAP
S ARE IN FEET BELOW GROUND SURFACE.
OBTAINED FROM DRILLERS LOGS.

OXIMATE HORIZONTAL SCALE: 1"=1000'
VERTICAL SCALE: 1"=60'

GEOLOGIC KEY

Qal1 – RECENT STREAM CHANNEL DEPOSITS

Qal2 – TERRACED SURFACE ALONG CHANNEL COURSE STREAM CHANNEL DEPOSITS

Qal3 – ALLUVIUM OR SLOPE WASH

HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

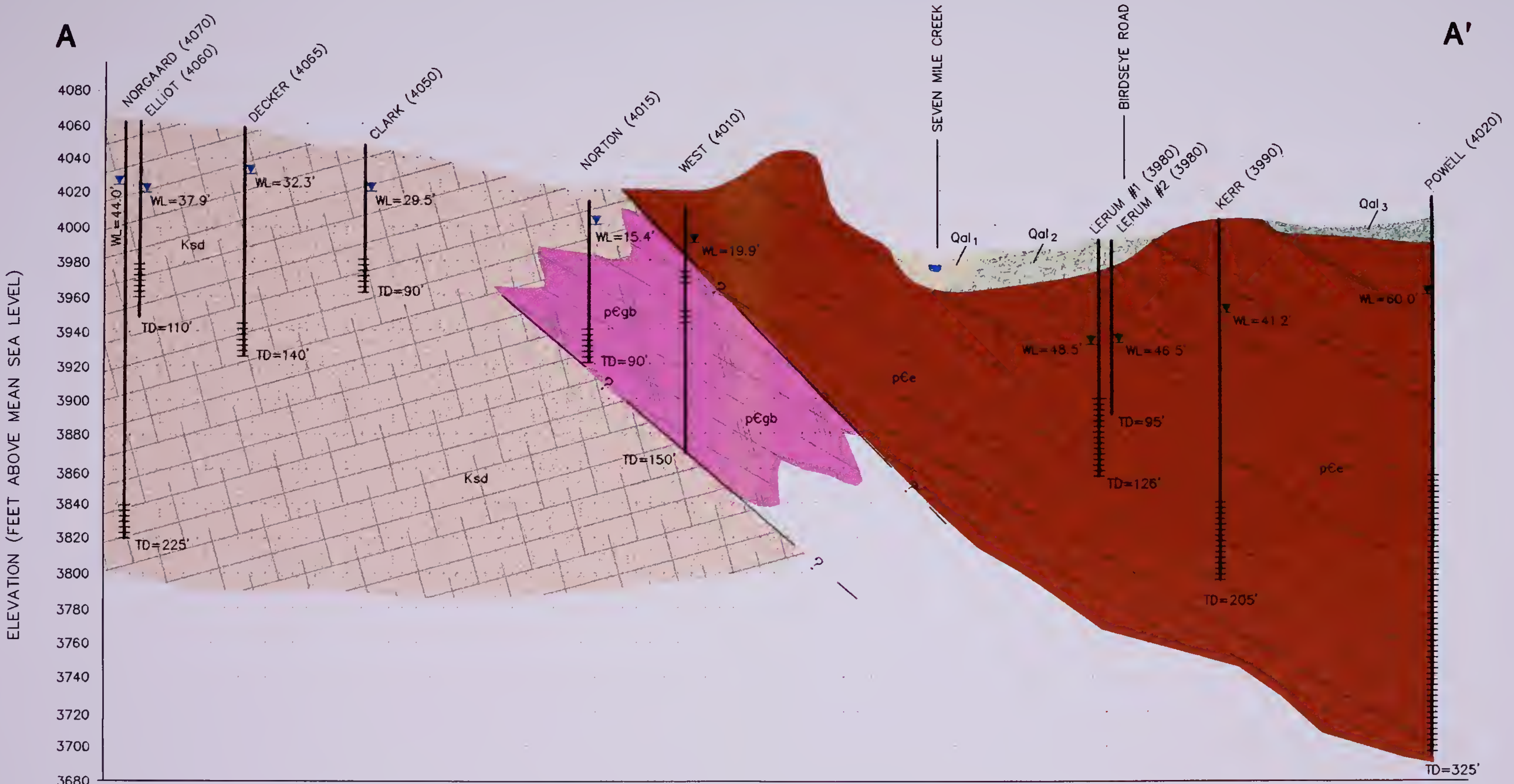
FIGURE 2

GIC CROSS SECTION OF SEVEN MILE CREEK AREA A–A'

PRC ENVIRONMENTAL MANAGEMENT, INC.

MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

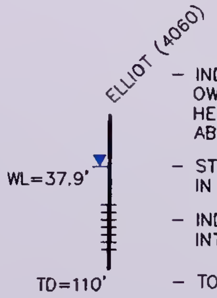
CS–A DWG – 06/06/95 – RVR – 001-0396FTHA



GEOLOGIC KEY

- Qal1 – RECENT STREAM CHANNEL DEPOSITS
- Qal2 – TERRACED SURFACE ALONG CHANNEL; COURSE STREAM CHANNEL DEPOSITS
- Qal3 – ALLUVIUM OR SLOPE WASH
- Ksd – SYENODIORITE
- p€e – BELT SERIES ROCK
- p€gb – GABBRO

LEGEND



- – INDICATES PRIVATE WELL OWNER AND ESTIMATED WELL HEAD ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- – STATIC WATER LEVEL (WL) IN FEET BELOW GROUND SURFACE
- – INDICATES PERFORATED INTERVAL OF WELL
- – TOTAL DEPTH IN FEET

NOTES: ALL WELL ELEVATIONS ESTIMATED FROM USGS TOPOGRAPHIC MAP
ALL WELL AND WATER LEVEL DEPTHS ARE IN FEET BELOW GROUND SURFACE.
ADDITIONAL GEOLOGIC INFORMATION OBTAINED FROM DRILLERS LOGS.

APPROXIMATE HORIZONTAL SCALE: 1"=1000'
VERTICAL SCALE: 1"=60'

FORT HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 2
GEOLOGIC CROSS SECTION OF SEVEN MILE CREEK AREA A–A'

PRC ENVIRONMENTAL MANAGEMENT, INC.

MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

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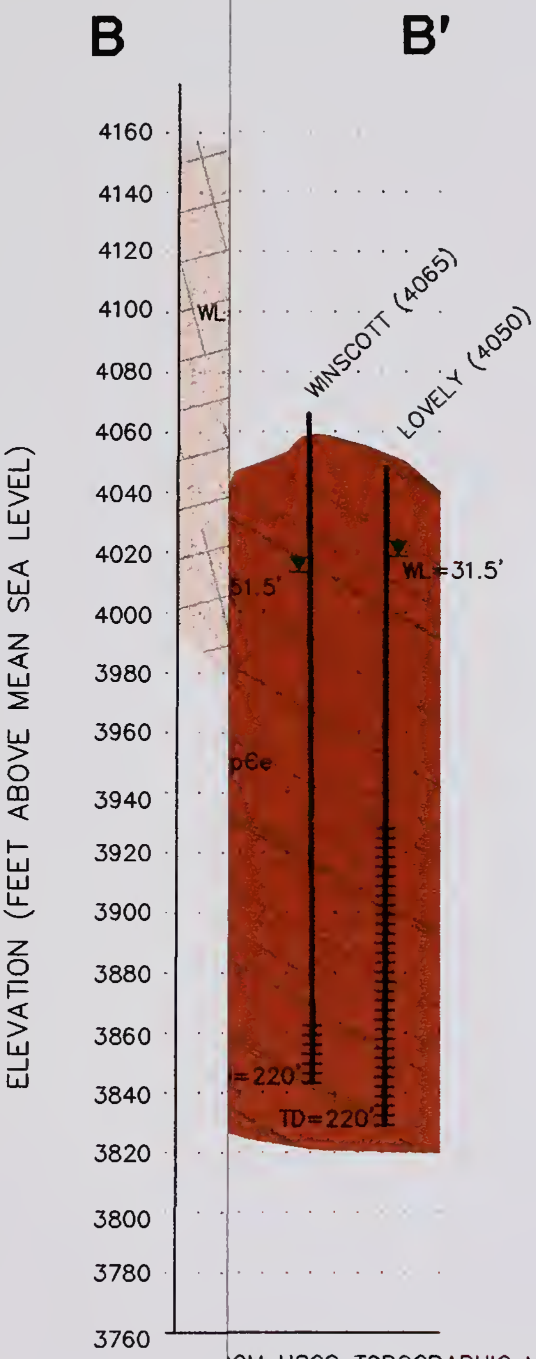


OM USGS TOPOGRAPHIC MAP
ARE IN FEET BELOW GROUND SURFACE.
OBTAINED FROM DRILLERS.

OXIMATE HORIZONTAL SCALE: 1"=1000'
VERTICAL SCALE: 1"=60'

GEOLOGIC KEY

Qal_1 – RECENT STREAM CHANNEL DEPOSITS

Qal_2 – TERRACED SURFACE ALONG CHANNE
COURSE STREAM CHANNEL DEPOSITS

Qal_3 – ALLUVIUM OR SLOPE WASH

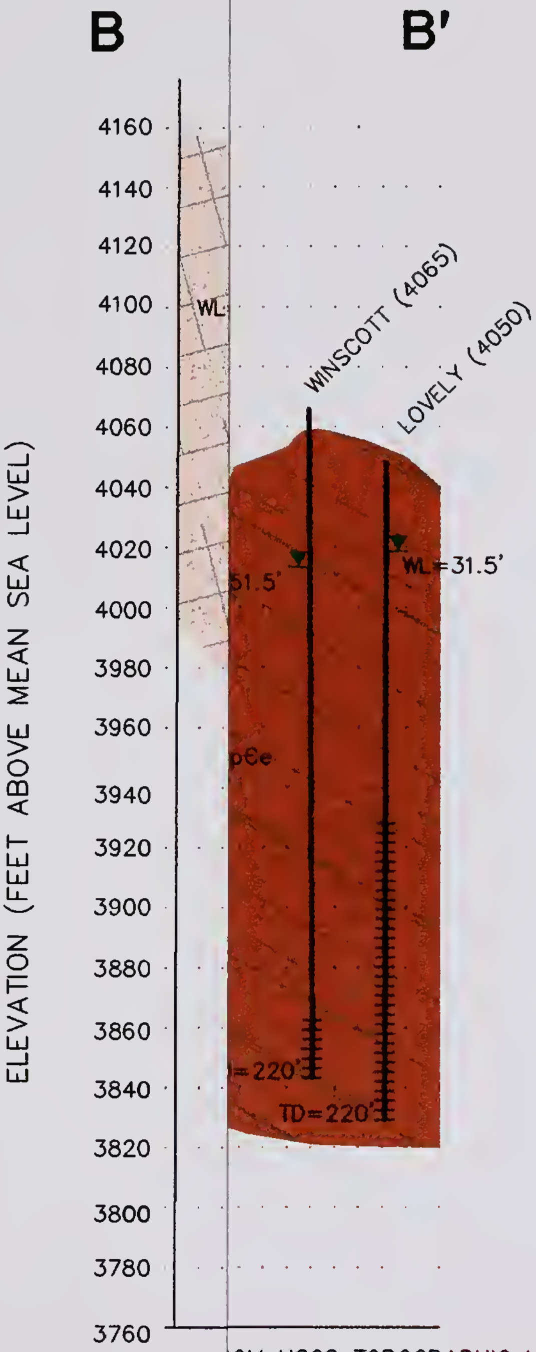
MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 3
GIC CROSS SECTION OF SEVEN MILE CREEK AREA B–B'

PRC ENVIRONMENTAL MANAGEMENT, INC.

CS-B.DWG – 06/06/95 – RVR – 001-0396FTHA



OM USGS TOPOGRAPHIC MAP
S ARE IN FEET BELOW GROUND SURFACE.
OBTAINED FROM DRILLERS.

GEOLOGIC KEY

Qal_1 – RECENT STREAM CHANNEL DEPOSITS

Qal_2 – TERRACED SURFACE ALONG CHANNE
COURSE STREAM CHANNEL DEPOSITS

Qal_3 – ALLUVIUM OR SLOPE WASH

OXIMATE HORIZONTAL SCALE: 1"=1000'
VERTICAL SCALE: 1"=60'

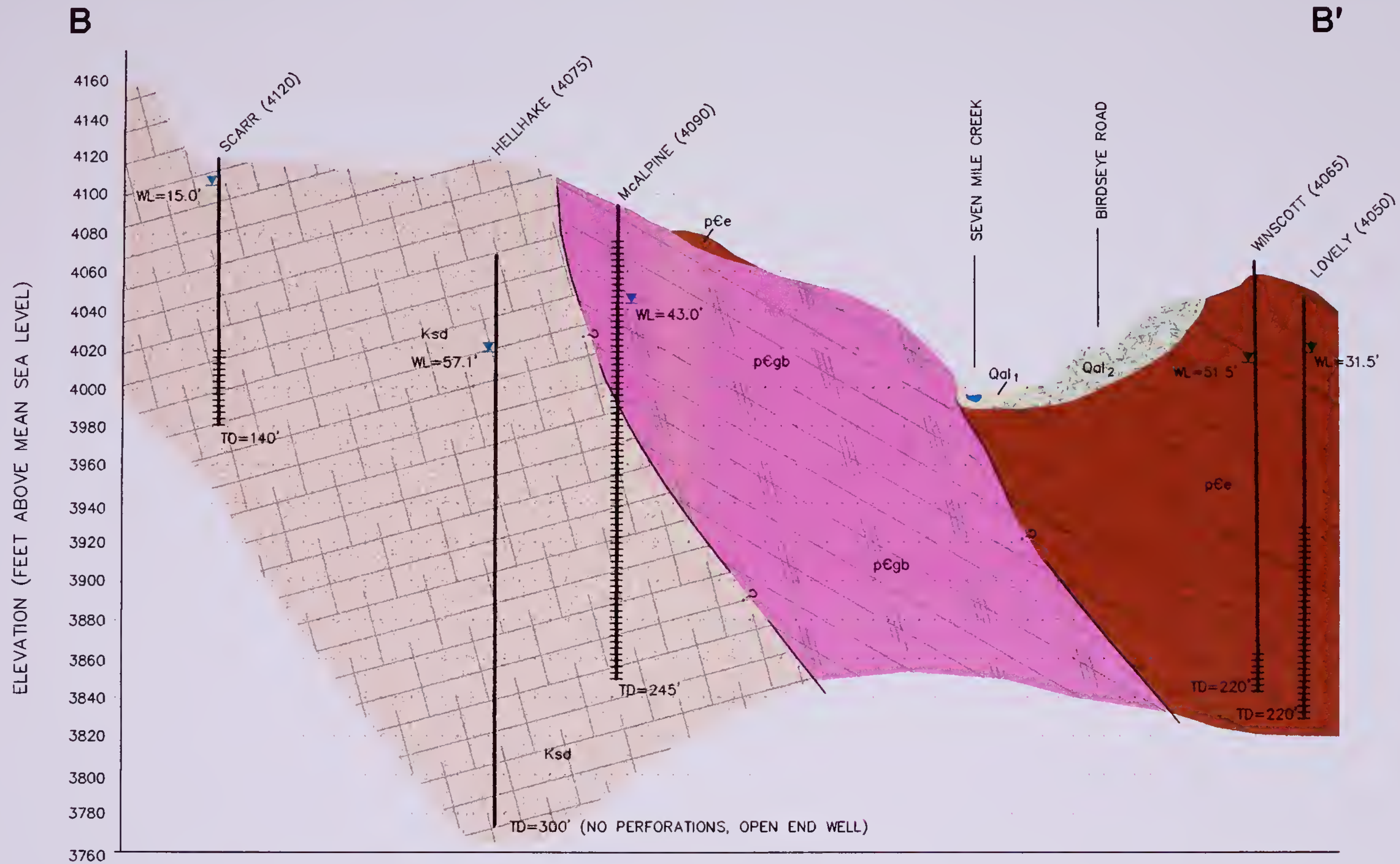
HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 3
GIC CROSS SECTION OF SEVEN MILE CREEK AREA B–B'

MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

PRC ENVIRONMENTAL MANAGEMENT, INC.

CS-B.DWG – 06/06/95 – RVR – 001-0396FTHA



NOTES: ALL WELL ELEVATIONS ESTIMATED FROM USGS TOPOGRAPHIC MAP
ALL WELL AND WATER LEVEL DEPTHS ARE IN FEET BELOW GROUND SURFACE.
ADDITIONAL GEOLOGIC INFORMATION OBTAINED FROM DRILLERS.

GEOLOGIC KEY

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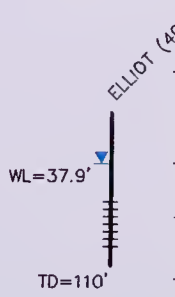
Qal_3 – ALLUVIUM OR SLOPE WASH

Ksd – SYENODIORITE

pꞒe – BELT SERIES ROCK

pꞒgb – GABBRO

LEGEND



– INDICATES PRIVATE WELL OWNER AND ESTIMATED WELL HEAD ELEVATION IN FEET ABOVE MEAN SEA LEVEL

– STATIC WATER LEVEL (WL) IN FEET BELOW GROUND SURFACE

– INDICATES PERFORATED INTERVAL OF WELL

– TOTAL DEPTH IN FEET

APPROXIMATE HORIZONTAL SCALE: 1"=1000'
VERTICAL SCALE: 1"=60'

FORT HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 3
GEOLOGIC CROSS SECTION OF SEVEN MILE CREEK AREA B–B'

PRC ENVIRONMENTAL MANAGEMENT, INC.

MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

ELEVATION (FEET ABOVE MEAN SEA LEVEL)

OM USGS TOPOGRAPHIC MAP
; ARE IN FEET BELOW GROUND SURFACE.
)BTAINED FROM DRILLERS LOGS.

GEOLOGIC KEY

Qal$_1$ – RECENT STREAM CHANNEL DEPOSITS

Qal$_2$ – TERRACED SURFACE ALONG CHANNEL
COURSE STREAM CHANNEL DEPOSITS

Qal$_3$ – ALLUVIUM OR SLOPE WASH

XIMATE HORIZONTAL SCALE: 1"=600'
VERTICAL SCALE: 1"=60'

MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 4

GIC CROSS SECTION OF SEVEN MILE CREEK AREA C–C'

PRC ENVIRONMENTAL MANAGEMENT, INC.

CS-A.DWG – 06/08/95 – RVR – 001-0396FTHA

ELEVATION (FEET ABOVE MEAN SEA LEVEL)

OM USGS TOPOGRAPHIC MAP
; ARE IN FEET BELOW GROUND SURFACE.
)BTAINED FROM DRILLERS LOGS.

XIMATE HORIZONTAL SCALE: 1"=600'
VERTICAL SCALE: 1"=60'

GEOLOGIC KEY

Qal$_1$	– RECENT STREAM CHANNEL DEPOSITS
Qal$_2$	– TERRACED SURFACE ALONG CHANNEL COURSE STREAM CHANNEL DEPOSITS
Qal$_3$	– ALLUVIUM OR SLOPE WASH

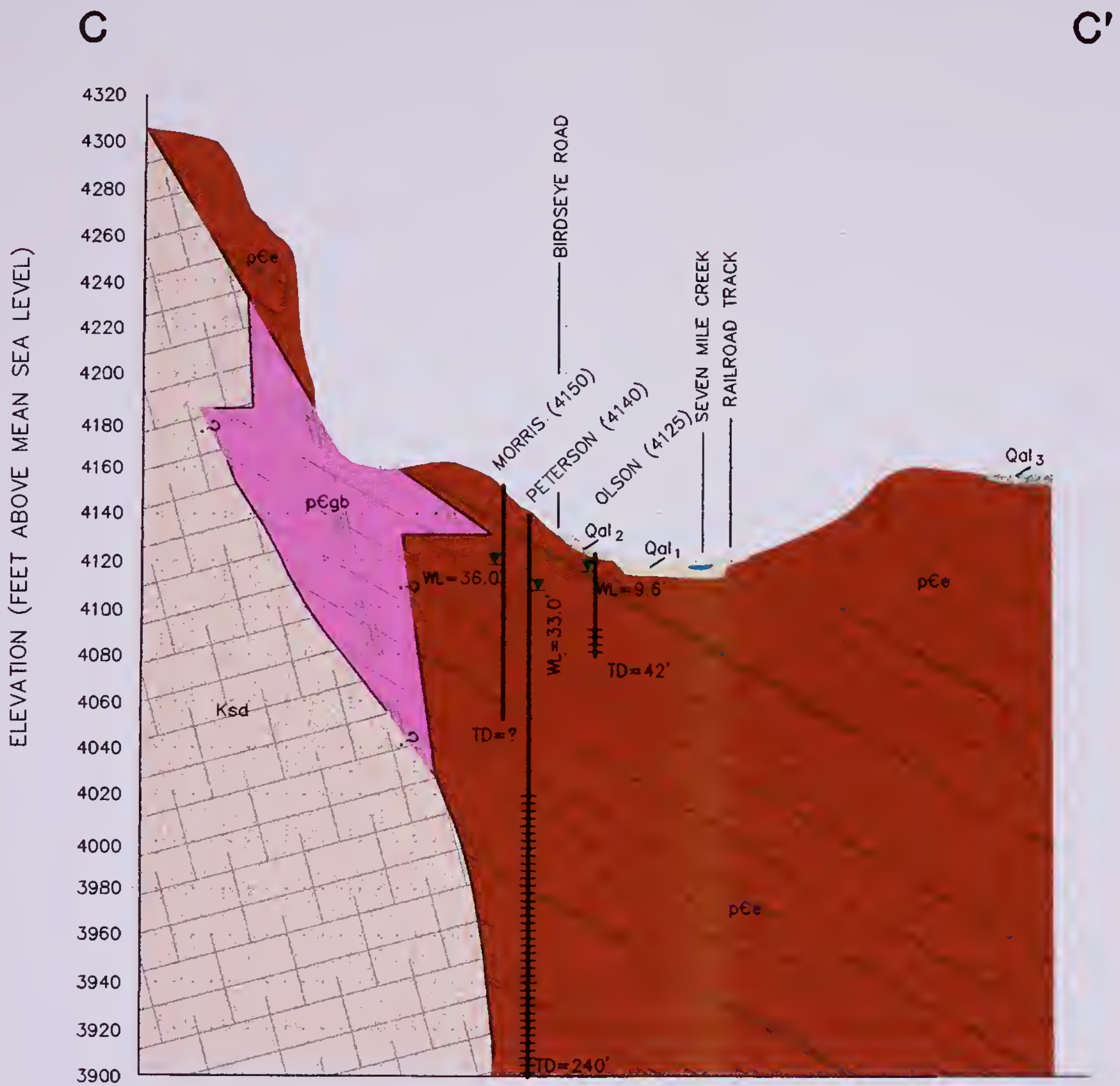
MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 4
GIC CROSS SECTION OF SEVEN MILE CREEK AREA C–C'

PRC ENVIRONMENTAL MANAGEMENT, INC.

CS-A.DWG – 06/06/95 – RVR – 001-0396FTHA



NOTES: ALL WELL ELEVATIONS ESTIMATED FROM USGS TOPOGRAPHIC MAP
ALL WELL AND WATER LEVEL DEPTHS ARE IN FEET BELOW GROUND SURFACE.
ADDITIONAL GEOLOGIC INFORMATION OBTAINED FROM DRILLERS LOGS.

GEOLOGIC KEY

Qal1 – RECENT STREAM CHANNEL DEPOSITS

Qal2 – TERRACED SURFACE ALONG CHANNEL; COURSE STREAM CHANNEL DEPOSITS

Qal3 – ALLUVIUM OR SLOPE WASH

Ksd – SYENODIORITE

pЄe – BELT SERIES ROCK

pЄgb – GABBRO

LEGEND

ELLIOT (4060) – INDICATES PRIVATE WELL OWNER AND ESTIMATED WELL HEAD ELEVATION IN FEET ABOVE MEAN SEA LEVEL

WL=37.9' – STATIC WATER LEVEL (WL) IN FEET BELOW GROUND SURFACE

– INDICATES PERFORATED INTERVAL OF WELL

TD=110' – TOTAL DEPTH IN FEET

APPROXIMATE HORIZONTAL SCALE: 1"=600'
VERTICAL SCALE: 1"=60'

FORT HARRISON HEAD RANCH HYDROGEOLOGICAL ASSESSMENT
HELENA, MONTANA

FIGURE 4
GEOLOGIC CROSS SECTION OF SEVEN MILE CREEK AREA C–C'

PRC ENVIRONMENTAL MANAGEMENT, INC.

MODIFIED FROM KNOPF (1963) AND SCHMIDT (1986)

4 DWG - 06/06/95 - RVR - 001-0396FTHA

Seven Mile Creek are comprised of sand and relatively coarse grained, rounded gravel and cobbles, which suggests they were deposited in a relatively high energy fluvial environment. The more recent stream valley deposits are finer grained relative to the older deposits which suggest a lower energy depositional environment. The hydraulic relationship of the surface water and groundwater to the bedrock and alluvium in the Seven Mile Creek project area is described later in this report.

Faulting has occurred within both the precambrian Belt Supergroup rocks and the igneous intrusive rocks in the vicinity of Seven Mile Creek. Primary faults in the Helena area have been mapped and discussed by Schmidt (1986). Tilting, shattering, and fracturing of bedrock in areas of significant faulting may modify the water-yielding capabilities of the geologic units, however, little information is available on the effect local faulting has had on hydrogeologic conditions in the vicinity of the Head Ranch project area.

Hydrostratigraphic Units

For the purposes of this addendum, "important hydrostratigraphic units" are defined as geologic units or formations that can likely be used, or are currently being used, for beneficial groundwater use. Based on review of well logs, field reconnaissance, and review of published reports, important hydrostratigraphic units in the vicinity of the Head Ranch include (1) the fractured metasedimentary rocks of the Belt Supergroup,(2) the intrusive igneous rocks, and (3) the alluvial deposits. The contacts between these hydrostratigraphic units represent geologic unconformities which may be fault related, related to emplacement of intrusives, or both.

Within the upper portion of the Head Ranch, the Seven Mile Creek stream deposits and nearby surficial alluvial deposits and slope wash are likely not significant hydrostratigraphic units. In general, these deposits are interpreted to be relatively thin and have relatively limited width, bounded by bedrock on both sides. Although groundwater may be present within the alluvium in this area, it is not likely that the unconsolidated deposits can be developed as a beneficial groundwater supply. As Seven Mile Creek nears its confluence with Ten Mile Creek in the lower Head Ranch area, the alluvial deposits become thicker and more significant as a groundwater supply. Several alluvial wells east of the Head Ranch provide adequate water supplies for domestic purposes.

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Based on a review of domestic well logs in the project area, most wells have been completed in bedrock. Similar to other water users in the vicinity of the Head Ranch, groundwater development would likely be in the deeper bedrock formations unless deeper alluvial deposits on the east end of the Head Ranch can be developed. However, there are limited data available for this area of the Head Ranch.

3.0 SURFACE WATER RESOURCES

Surface water resources were evaluated for this addendum by conducting a literature review, field reconnaissance, interviewing USGS personnel, and conducting a synoptic stream flow measurement run on Seven Mile Creek. The prominent surface water feature within the project area is Seven Mile Creek. There are no perennial tributaries to Seven Mile Creek within the project area.

On March 20, 1990 and October 25, 1990, USGS personnel conducted synoptic streamflow measurements on Seven Mile Creek. Results from the flow measurements indicate that there was no significant gain or loss of surface water between the upper and lower stations (Attachment B). Streamflow measurement error is commonly 10 to 20 percent. These data suggest that in the early spring and fall, Seven Mile Creek does not gain or lose appreciable amounts of surface flow to the groundwater system.

On May, 24, 1995, PRC conducted a synoptic flow run on Seven Mile Creek. Streamflow measurements were made at four locations within the Head Ranch and at two locations upstream of Head Ranch (SW-1 through SW-6, Figure 1). The surface water diversion one-quarter mile above the ranch (Figure 1) was in use during the time of the flow measurements and the resulting flow loss was considered in the data interpretations. Flow data from the PRC synoptic run indicate a flow loss of surface water within the narrower portion of the Seven Mile Creek channel, a no loss of flow in the vicinity of the treatment ponds, and a flow loss in the lower portion of the stream. Based on the PRC flow data, Seven Mile Creek was losing surface flow to the groundwater system during the higher runoff period in May 1995.

4.0 GROUNDWATER RESOURCES

Groundwater resources were evaluated by reviewing available and applicable literature, interviewing local USGS personnel familiar with Helena Valley hydrogeology, evaluating drilling logs for local domestic water wells, measuring water levels in domestic wells, and confirming the local geologic conditions in the field. Figure 1 shows locations of selected domestic water wells inventoried for this study.

Based on measured water levels in private wells and USGS data, groundwater flow direction within the bedrock hydrostratigraphic unit approximates surface topography, although some variations in potentiometric head occur. Figures 2 through 4 include water levels in wells along or near the cross sections. The figures indicate that overall groundwater flow direction is toward the Seven Mile Creek stream valley. Figure 4 contains limited water level data. Overall, the data are insufficient to characterize groundwater flow direction adjacent to Seven Mile Creek. North of Head Ranch, in the Sunny Vista subdivision area, water level data show that the groundwater gradient is toward Seven Mile Creek. Groundwater present in the bedrock aquifers north of the project area apparently do not provide significant recharge to the Seven Mile Creek alluvium. South of Seven Mile Creek, the groundwater system flows mostly parallel with Seven Mile Creek based on USGS data (1992). However, there is a small gradient toward Seven Mile Creek as shown in Figures 2 and 3.

In the eastern portion of the Head Ranch, which is close to the Helena Valley, the Seven Mile Creek alluvium may become saturated. The alluvium could possibly be used as a groundwater supply depending on the depth to bedrock. Limited well information is available on the alluvial aquifer in this area of the Head Ranch.

Attachment C contains hydrographs showing water level fluctuations within selected private wells in the vicinity of the Head Ranch. Water level data were obtained from the USGS. The period of record for the hydrographs is from January 1992 through April 1995. For comparison purposes, Helena area precipitation for that period is also shown on the graphs.

In general, the unconsolidated alluvial deposits in the Seven Mile Creek stream valley within the Head Ranch do not appear to be a significant aquifer system. Seven Mile Creek apparently provides a limited amount of recharge to the alluvial aquifer during wetter parts of the year. However, drillers logs and water level data collected near Seven Mile Creek indicate that the stream deposits are mostly unsaturated and are relatively thin. Beneficial use of groundwater in the Seven Mile Creek vicinity is concentrated in the bedrock underlying the stream deposits.

5.0 EVALUATION OF POTENTIAL IMPACTS TO WATER RESOURCES

The following section describes the potential impacts related to residential, industrial, and agricultural development of the Head Ranch.

Residential Development of the Head Ranch

Residential development of the Head Ranch and the associated impacts to groundwater resources is a concern to residents living near the Head Ranch. Several concerns related to potential water resources impacts and the land exchange were expressed in comments received on the draft EA from residents of the Sunny Vista subdivision (located north of Seven Mile Creek on the flanks of the Scratch Gravel Hills).

Groundwater development, or use of existing surface water rights, would be necessary to supply water for a residential development at the Head Ranch. The relative size of the water development, and the associated potential impacts, would be dependent on the size and number of lots in a proposed subdivision or development. However, there are some conclusions that can be drawn from the available data.

Assuming groundwater development in the Head Ranch occurs, water levels within the domestic wells of the residents north of Seven Mile Creek in the Sunny Vista subdivision would likely not be impacted. This conclusion is based upon the apparent groundwater flow direction toward Seven Mile Creek from the Sunny Vista subdivision. There is recharge to the groundwater system beneath Seven Mile Creek in the Head Ranch vicinity apparently originating from the bedrock hydrostratigraphic unit in the Scratchgravel Hills. Nearby residents south of Seven Mile Creek, however, may be impacted by a relatively close and large groundwater development and past development of groundwater at Fort Harrison has apparently affected some domestic wells in this area.

A large groundwater development in the Head Ranch would likely create a groundwater cone of depression, the extent of which would depend on the withdrawal rate and amount of continuous pumping. Increased drawdown within the bedrock in the vicinity of the Head Ranch could theoretically increase the regional groundwater gradient and flow velocity from the Scratchgravel Hills and other locations toward Seven Mile Creek. However, the significance of increasing the groundwater gradient toward the Head Ranch in comparison to increased residential groundwater development in the Sunny Vista subdivision (or in areas south of Seven Mile Creek) cannot be estimated. Aquifer testing is recommended prior to groundwater development in the Head Ranch area to confirm the hydraulic connection between hydrostratigraphic units, to evaluate recharge boundary conditions, to evaluate the effect of pumping on nearby wells, and provide a more quantitative estimation of potential impacts on groundwater resources.

Use of surface water for domestic use may also be considered for a residential development. A water treatment system would be necessary to treat Seven Mile Creek surface water to drinking water standards. However, since surface water is currently used for agricultural purposes, no impact on water resources is likely under the surface water alternative for residential development, assuming the overall or cumulative residential water needs are less than the current agricultural water needs, treatment costs are not prohibitive, and water rights issues can be resolved. Additionally, it may be possible to reserve in-stream flows of Seven Mile Creek during the summer months by using surface water for a residential development. This type of water development may have the direct effect of improving fishery and aquatic habitats associated with Seven Mile Creek.

Industrial Development of the Head Ranch

No industrial land use is anticipated for the Head Ranch and therefore not evaluated as part of this addendum.

Agricultural Development of the Head Ranch

The Head Ranch is currently used for agricultural purposes. Surface water is typically diverted during the irrigation season (May through September) from Seven Mile Creek. In general, the diverted water is used to irrigate pasture within the Head Ranch. No impacts to water resources in the Head Ranch vicinity are anticipated assuming agricultural land use following the land exchange. This conclusion is based on the assumption that no significant changes occur related to (1) the type of water used (that is, surface water) and (2) the volume of water used to irrigate the fields. However, if agricultural land use includes installation of one or more high yield groundwater supply wells for irrigation, the potential impacts to groundwater and surface water resources would be similar to the residential land use alternative described above.

6.0 REFERENCES

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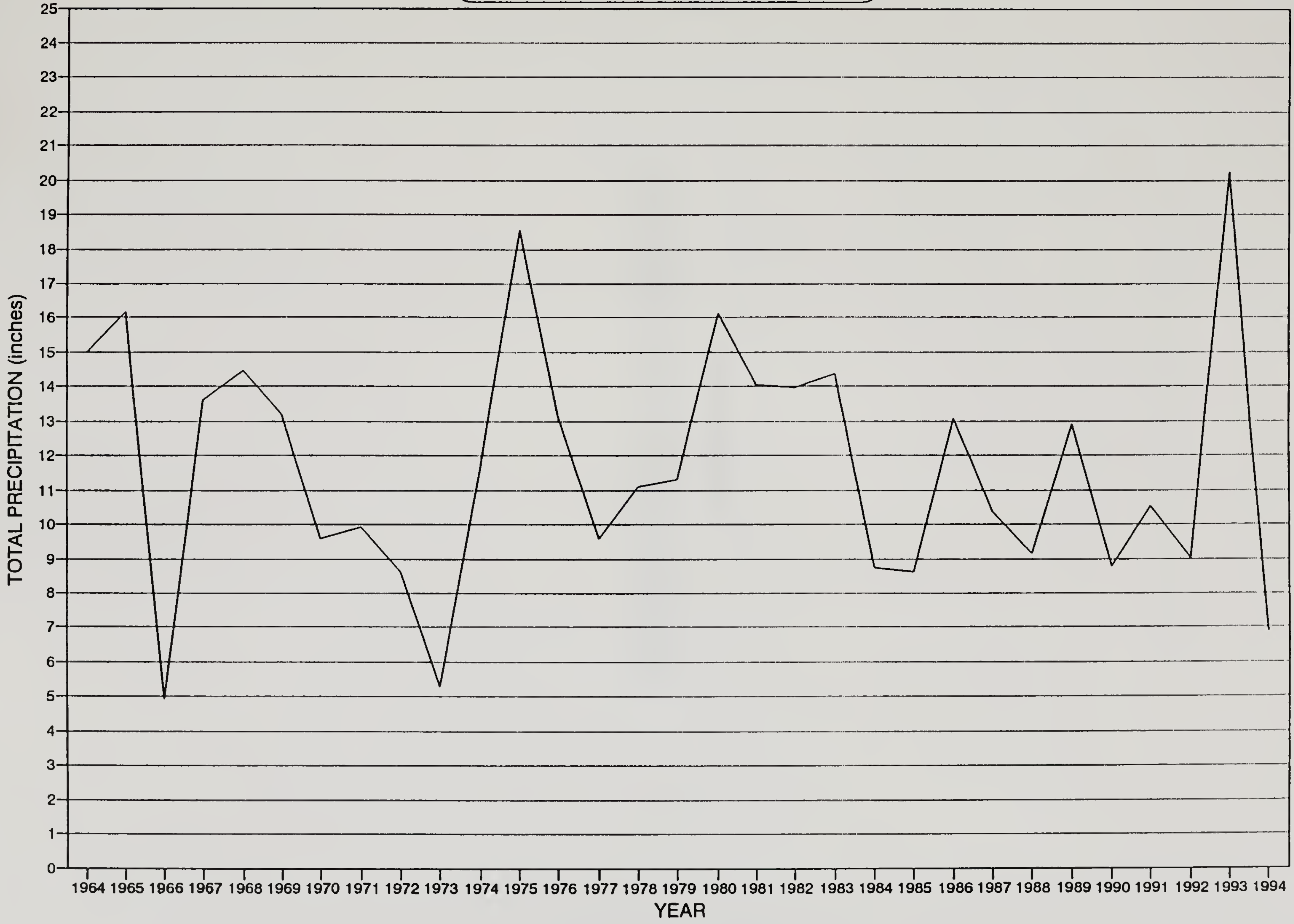
ATTACHMENT A

HELENA AREA ANNUAL PRECIPITATION - 1964 THROUGH 1994

HELENA AREA PRECIPITATION

1964 Through 1994



ATTACHMENT B

SEVEN MILE CREEK SYNOPTIC STREAMFLOW MEASUREMENT DATA IN CUBIC FEET PER SECOND

SEVEN MILE CREEK SYNOPTIC STREAMFLOW MEASUREMENT DATA IN CUBIC FEET PER SECOND

U.S. Geological Survey Data

Date	Station		
	USGS-1	USGS-2	USGS-3
March 20, 1990	5.22	4.63	5.00
October 25, 1990	4.93	3.99	4.59

Source: USGS 1992

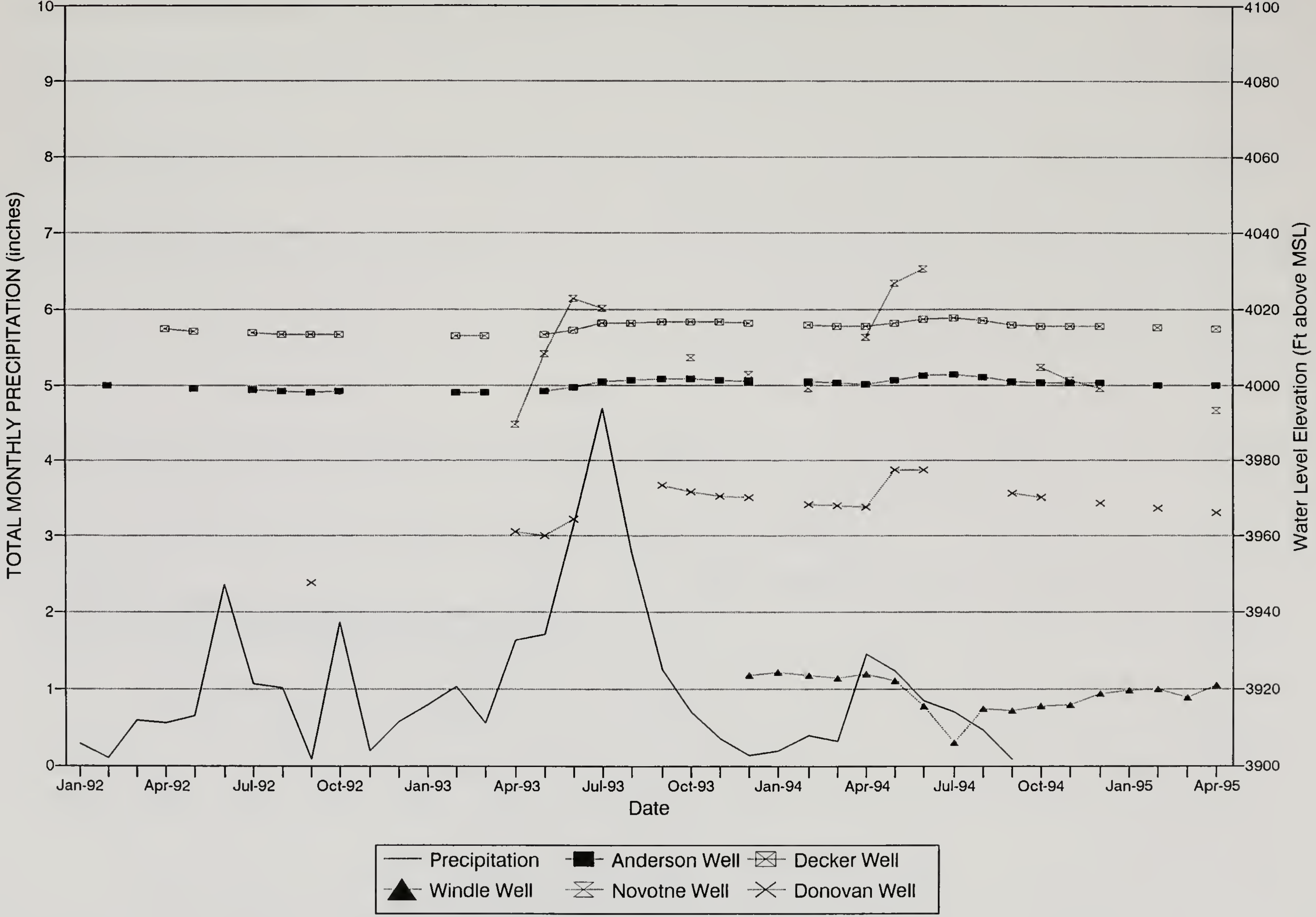
PRC Environmental Management, Inc. Data

Date	Station					
	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6
May 24, 1995	14.4	18.1	19.4	15.8	21.0	23.1

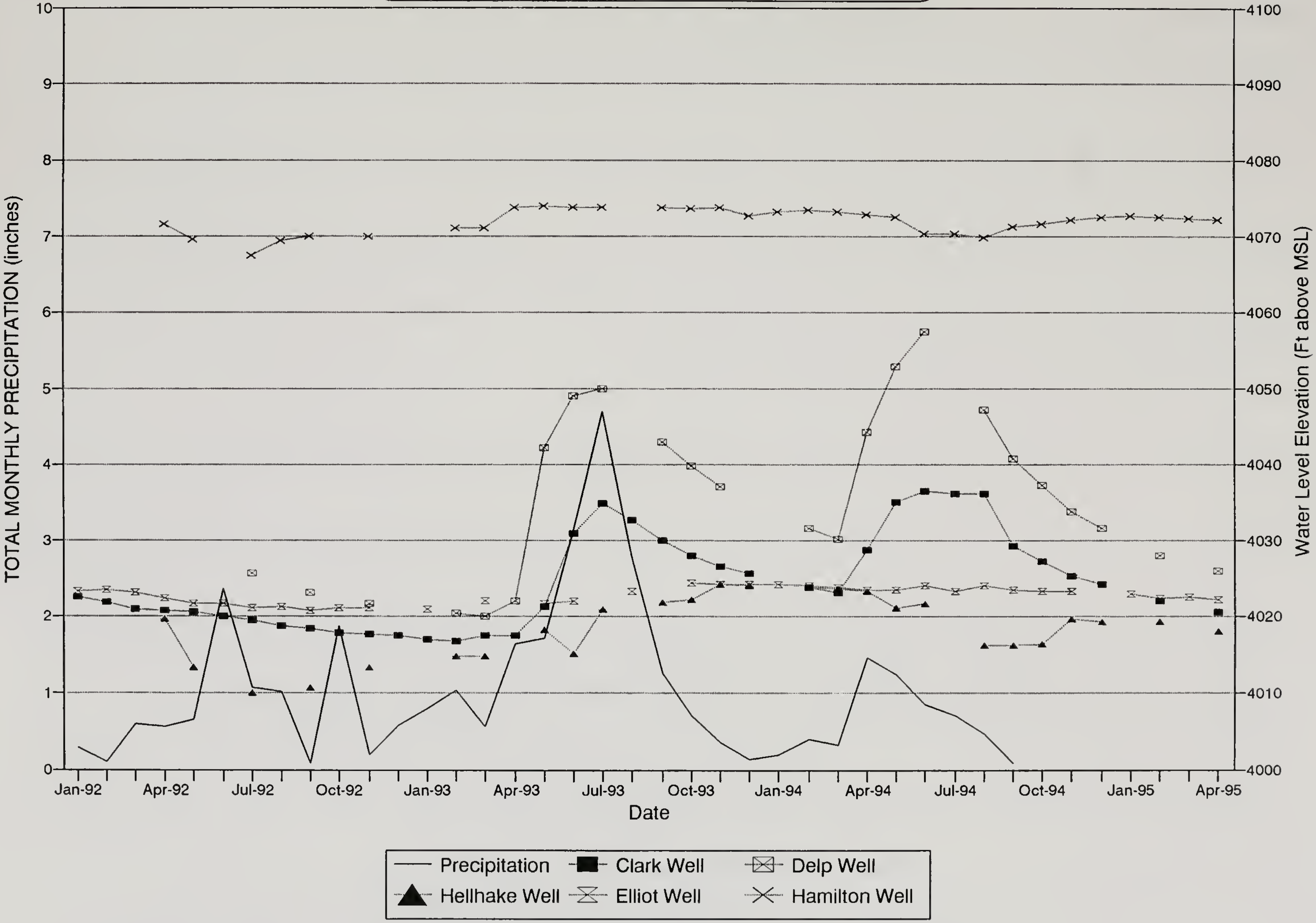
ATTACHMENT C

WATER LEVEL HYDROGRAPHS OF PRIVATE WELLS

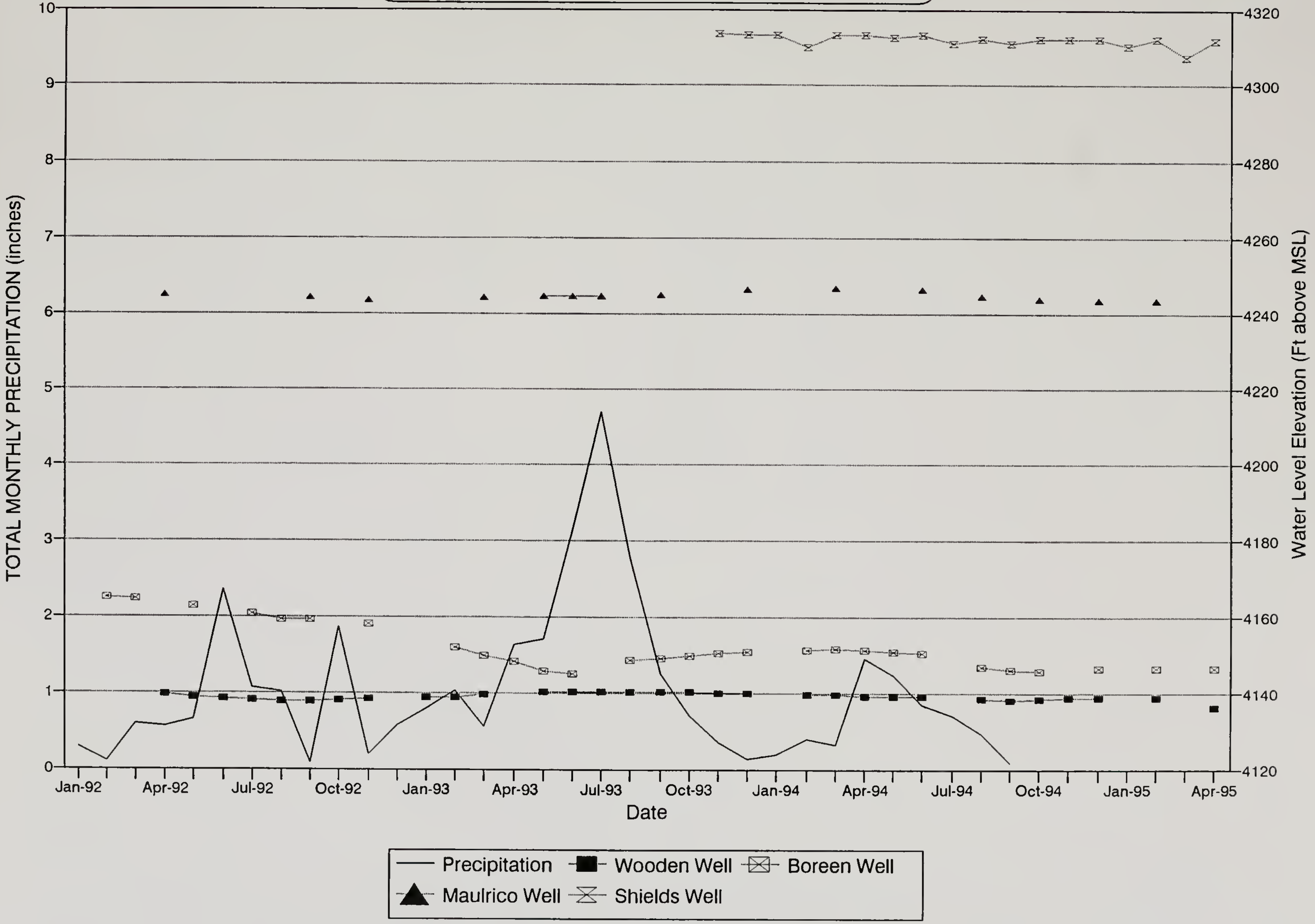
HELENA AREA MONTHLY PRECIPITATION AND PRIVATE WELL WATER LEVEL FLUCTUATIONS



HELENA AREA MONTHLY PRECIPITATION AND PRIVATE WELL WATER LEVEL FLUCTUATIONS



HELENA AREA MONTHLY PRECIPITATION AND PRIVATE WELL WATER LEVEL FLUCTUATIONS



APPENDIX B

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Denver, CO 80225

Environmental Protection Agency
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APPENDIX C

BIBLIOGRAPHY

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APPENDIX D

EXPLANATION OF NOISE FOR THE LAYPERSON

Noise Impact Analysis is at best a complicated procedure. Because people react to noise in several ways, objective methodologies are difficult to develop. It is even more difficult to obtain a census as to the effectiveness of these methodologies.

Because human response is the most frequent area of concern in analyzing noise, one of the more common units of measure considers only that part of the noise heard by the human ear. This is called the "a-weighted" measure and considers only the sound between 16 and 20,000 cycles per second (the frequency is within the range of human hearing). Measurements of such noise are usually expressed in a-weighted decibels "dBA".

One method of measuring the relative noise measures in dBA is through the use of the day/night average sound level (Ldn) metric. The Ldn is based on an energy summation of the aggregate noise environment as measured in a-weighted decibel units.

The day/night average sound level (ldn) measures the noise environment at a location over a twenty-four (24) hour period. It is equivalent in terms of sound energy to the level of a continuous a-weighted sound level with 10 dBA added to night-time levels. To calculate Ldn values, the noise contribution from each significant aircraft operation (take-off and landing) occurring over a 24-hour period are summed on an energy basis to obtain the Ldn value. Contours are present noise levels in average daily duration of perceived decibels (dBA).

The Ldn noise levels are depicted by a series of contour line superimposed on a map of the airport and its environs. These level are calculated for designated points on the ground from the weighted summation of the effects of all aircraft operations. Some operation are far enough away from the location that their effect is minimal, while other operations may dominate noise exposure in that location.

This summation of noise levels is made on an energy basis. It is useful to think of this accumulation of noise energy from passing aircraft the same as a series of passing rain storms. Each storm would produce an amount of rain in direct proportion to the degree of acoustic energy produced by the passing aircraft.

At the end of a 24-hour period, a rain gauge would indicate the total rainfall received during that period, although the rain fell only during brief, intense showers. Therefore, a graph of the aircraft noise energy accumulation would show a peak burst of energy with the passing of each aircraft and a period of low energy levels between these events. The Ldn level represents the average noise energy received at a given location during the time

measured. The range of background noise levels outside dwelling units is large. A typical farm will average 49 Ldn while an apartment next to the freeway will experience noise levels of 89 Ldn.

The relationships between noise levels and various land uses has been well documented in both the United States and Europe. As a part of these studies, the acceptability of various noise levels have been correlated with land types. Ldn levels below 65 have been generally considered acceptable for single-family residential areas. All higher Ldn levels are acceptable for land uses such as industrial, commercial and agricultural (except livestock). Existing noise sources and their open environment tend to mask out aircraft noise between 55 and 65 Ldn.

APPENDIX E

February 23, 1995

Dear Interested Reader:

Thank you for taking the time to comment on the Department of Military Affairs Draft Environmental Assessment (EA) on the proposed Fort Harrison land exchange. The purpose of the exchange is to consolidate federal holdings to ensure that existing live-fire ranges and training areas on the Fort Harrison complex remain usable into the future. We received over 30 written comments during the 30-day comment period. Public comments and concerns, along with comments from State and federal agencies will help us produce a better EA. Each written comment will be included in the appendix of the Final EA.

The majority of the comments we received centered on concerns associated with potential future actions on the Head Ranch should the proposed action be implemented. Many readers commented that the Final EA should include a discussion of the environmental impacts associated with subdivision of the Head Ranch.

Army regulation as well as Federal and State law require us to include a systematic examination of possible and probable environmental consequences of implementing the proposed action. We have no knowledge of - nor are we a proponent for - future subdivision of the Head Ranch should the Proposed Action be implemented. However, in the Final EA, we will address the range of potential impacts associated with the Proposed Action given current County-wide trends in development. We cannot assess impacts for all future potential actions taken independently of our decision nor does the law require us to address such unconnected actions.

Many of the comments we received expressed strong support for Alternative No. 5, (outright purchase of private inholdings and retain Head Ranch). This Alternative remains viable but was not selected as our proposed action in the Draft EA because of several obstacles. Currently, there is a federal moratorium on outright purchase of new land if the size is in excess of one thousand acres or the cost is in excess of one million dollars.

Additionally, funding for the purchase of this land would have to come from a special Congressional appropriation and given the current mood of Congress, this Alternative remains less feasible than the Proposed Action.

We expect to complete the draft Final EA within the next 90 days. The Final EA will be made available for comment to all interested parties. We appreciate your concerns and we will continue to make every effort to ensure public involvement in the environmental assessment.

The Department of Military Affairs points of contact for matters relating to the EA are Dr. Clif Youmans (444-7974) or Captain Steve Martinka (444-7943).

Sincerely,

John B. Wheeler, J.D.
Environmental Program Manager

c: MG John E. Prendergast, The Adjutant General
Lewis & Clark County Commissioners
Senator Baucus
Senator Burns
Representative Williams
Representative Grady

DEPARTMENT OF MILITARY AFFAIRS

MARC RACICOT, GOVERNOR
P.O. BOX 4789

STATE OF MONTANA

OFFICE OF THE ADJUTANT GENERAL
(406) 444-6910
HELENA MONTANA 59604-4789

June 8, 1995

Dear Interested Reader:

Enclosed please find a copy of the Montana Army National Guard's draft final environmental assessment. Several changes have been made to the EA since the draft. Alternatives 3, 4, and 5 presented in the draft EA were considered but determined to no longer be feasible for reasons described in the draft final. This EA is being sent to each household that took the time to comment on the draft EA. We will be accepting comments on the final draft until **June 23rd.**

We received 34 letters which expressed concern about the potential impacts to surface and ground water should the land exchange be implemented. PRC Environmental, Inc was contracted to conduct a hydro-geological study of the surface and groundwater resource in the vicinity of the Head Ranch. This study is attached to the EA as Appendix A.

Many of the letters we received expressed concern about the potential for development of Head Ranch should ownership change from federal to private. We understand that the potential for some development exists on the Head Ranch. We have made a sincere effort to address the potential impacts of some development given county-wide trends. The PRC hydrogeological study was commissioned specifically to meet that need.

If you have any questions, please call either Clif Youmans at 444-7974 or Steve Martinka at 444-7943. Please mail comments to:

Department of Military Affairs
Attn: ENV
PO Box 4789
Helena, MT 59604-4789

Sincerely,

John Wheeler

John Wheeler, J.D.
Environmental Program Manager

"AN EQUAL OPPORTUNITY EMPLOYER"

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PUBLIC COMMENT TOPIC	NUMBER OF COMMENTS RECEIVED
Potential for conservation easements	3
Potential to transfer training sites to Limestone Hills	2
Land appraisal process not adequately addressed	4
Socio-economic consequences not adequately addressed	2
Air quality - dust from roads	5
Noise - road traffic - urban noise	6
Road maintenance/costs	14
Biologial resources	32
Groundwater/hydrologic impacts	34
Impacts to 7-Mile Creek	12
Impact to schools	27
Soil erosion	1
Higher property taxes	9
Fire protection	2
Sewage treatment	3

cc: [illegible]
ENV
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[illegible]
5260 HEAD DRIVE
HELENA, MONTANA 59601
(406) 442-9075 (phone/fax)

February 12, 1995

Adjutant General John E. Pendergast
Montana Department of Military Affairs
Environmental Office
100 North Main
P.O. Box 4789
Helena, Montana 59604-4789

Dear General Pendergast

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (EA) for the proposed Fort Harrison Land Exchange (Head Ranch) between the Montana Army National Guard (DMA) and the private party (Gruber) dated December 1994. I offer the following general questions on the proposal and the attached comments on the EA.

It is my understanding that Gruber, at private meetings, has put the DMA on notice that if a favorable decision for acquiring the Head Ranch is not made, development will begin on the Gruber lands adjacent to your firing ranges. If this is true, is this the rationale for the [illegible] in the EA? Does the DMA expect to avoid public resistance and the private property rights government takings issue by shifting responsibility to Lewis and Clark County where the planning and subdivision review and leaving the public to fight an unpopular battle?

I believe there are several technical and socio-economic deficiencies and/or questions raised in the EA. It does not matter whether the deficiencies are addressed under the Montana Environmental or National Environmental Policy Act (MEPA or NEPA) e. g., depending on Federal or State jurisdiction. For the record, I am *not* advocating an Environmental Impact Statement (EIS) due to the waste of taxpayer money, significance of the proposal, delaying or disclosing information for supporting decisions, and deficient data included in a final EA.

The EA focuses exclusively on the interests of the military, not the consequences or associated actions of future development to the property in question. Urban encroachment, regardless onto farmland, land values, productivity and use of the land, technical issues, or private property rights, continues to be a problem. Could the DMA explore alternatives for exchange with other federal or private entities that would suit Gruber's purposes? This might involve more than a two-party exchange to retain value-for-value assets, plan quality development and services, retain selected areas, and meet management goals.

Please don't hesitate to contact me if you have questions or comments at (406) 442-9075.

Kind regards,

Larry J. Brown and P. J. "Fritzie" Cole-Brown

member - Board of
Directors - Sunny
Vista Homeowners Assoc

CC: Michael McHugh L-C Planner
Mike Griffith L+C Commission
Rep. Ed Grady
Sen. Tom Beck
U.S. Sen. Conrad Burns
U.S Sen. Max Baucus
U.S. Rep Pat Williams

COMMENTS ON THE
DRAFT ENVIRONMENTAL ASSESSMENT
MONTANA ARMY NATIONAL GUARD
FORT HARRISON LAND EXCHANGE
MONTANA DEPARTMENT OF MILITARY AFFAIRS

General Comment: Page 1-5

The focus of the EA is on the mission of the military and the importance Fort Harrison to military personnel and specialized training. There are other values surrounding the military island that should be addressed, e. g., technical and economic impacts.

Alternatives

2.1.1 – 2.1.2 No Action and/or swap for Gruber land only

Transferring additional training sites to the Limestone Hills near Townsend moves some concerns to an undevelopable area. In Alternative 3, there is mention that the Gruber exchange would provide a buffer around the Fort Harrison target ranges protecting the site from encroachment by the public or urban development. The firing range in the Limestone Hills already provide that buffer, though not necessarily handy for daily firearms practice, eliminates the concern.

2.1.2 – 2.1.4 Swap for Gruber and/or all other private land inholdings

The acre-for-acre, value-for-value issue has not been adequately addressed in the EA especially in perspective with land development prices versus bare land values. Presently the bare land values of Gruber land and Head Ranch, without possibility of services, are not comparable. Gruber potentially stands to make several million dollars, aside from developer's risk and investment, at taxpayer loss, if the land exchange is approved. Some of the parcels are currently approved for subdivision, and exempt from future review. Acquisition of those parcels could open the door for exemptions with *no potential* for public or agency subdivision review.

2.1.4 Outright purchase, retention of the Head Ranch – requires Congressional [illegible]priation

The general political position is that the government will not attain more land, even though a *fort* is the only legal entity of the federal government actually capable of title. A State appropriation may be possible with reservation as to the benefit to the State versus a private [illegible]

2.2 Cumulative Actions

The EA does not address the potential for real estate development and other land uses on all of the associated lands, economic variances of the foreseeable future, or the socio-economic consequences of a land exchange on the surrounding area, only to the military facilities.

3.2 Air Quality Resources

The EA does not consider the increase in dust generated by increased traffic on Head Lane and Franklin Mine Road or particulates from wood smoke if the land exchange results in development of the Head Ranch. Indirectly, future development may lead to higher taxes, land use restrictions, and traffic problems (speed) if the roads have to be paved to maintain public health and safety.

3.3 Noise

Primary and secondary noise has been addressed for the Fort Harrison part of the exchange but there is no information in the EA regarding increased noise from traffic, construction, urban habitation, pets, or restrictive covenants.

3.4 Biological Resources

The deficiencies in this section are for wildlife displacement from the Head Ranch area and instream habitat (addressed in the Water Resources comments) instead of the focus on lands favorable to Fort Harrison. In addition, the areas are commonly inhabited by whitetail deer, moose, bears, mountain lion, and other predators and smaller species. An inventory and narrative should be included in the EA. Conservation easements and restrictive covenants or zoning are difficult to enforce, do not protect private property rights, or existing lands.

3.4.1.2 Elk

The Montana Department of Fish, Wildlife, and Parks suggests that the area adjacent to and west of Fort Harrison is important or critical elk and mule deer winter range. However, MDFWP has a tendency to over-exaggerate that *all* areas are critical, important, or limiting to wildlife. The importance of the area north of Highway 12 to elk is particularly questionable. To suggest that the taxpayer acquire additional elk winter range as mitigation is a waste of money.

3.4.1.3 Mule Deer

The comments for Elk in 3.4.1.2 also apply to Mule Deer and other big game animals.

Water Resources

The reference to the U.S. Geological Survey study of the Helena Valley aquifer has little rev... the Gruber land west of Fort Harrison. For reference, the Helena Valley aquifer av... [illegible] able to the Head Ranch and surface and groundwater along Seven Mile Creek. he Seven Mile alluvial aquifer, downslope from the Sunny Vista Subdivision (north of the ad Ranch), should be evaluated in perspective with water availability and water quality for the Head Ranch and the surrounding area as mentioned in the following paragraph.

The EA does not mention the Scratchgravel Hills Geohydrology analysis by Wayne [illegible] Department of Natural Resources and Conservation, dated March 1, 1983. The rogeologic evaluation of the Scratchgravel area provides an extensive geologic and drogeologic description of the perched aquifer tapped by some residents in Sunny Vista and e consequences of water development.

5.2.1 Impacts to Surface Water

The runoff (flow) characteristics for Seven Mile Creek should be disclosed and an aluation of the fish habitat, irrigation and water rights for the Head Ranch should be included e EA does not address the impacts of and/or potential change in water use in the vicinity of Head Ranch and downstream water rights. The relationship between surface and oundwater and the potential for higher levels of consumptive use due to domestic or public ter supply development should be extensively addressed in the EA. Downstream irrigators in Green Meadow Ranch subdivision and other areas on Seven Mile and lower Ten Mile Creek uld be affected by upstream development.

The fisheries resource in Seven Mile Creek may be minimal as indicated by MDFWP [illegible] riparian areas, floodplains, and streamside habitats are required to be protected under te and federal laws (e.g., Streambank and Land Preservation Act (310) and/or Section 404 [illegible] Water Act, as appropriate. The EA should include an evaluation such as a stream reach ention coordinated through the Lewis and Clark Conservation District and State Water ality Division.

.2 Water Quality

Testing for volatile organic compounds (VOC's), metals, and cyanide does not provide a suite of water quality conditions in the area. The EA indicates that metals and cyanide ncentrations were below detection level in wells in the vicinity. Were the concentrations of mmon ions measured? The data should be disclosed with Quality Assurance/Quality Control ocedures for sampling, preservatives, and analyzing both surface and groundwater.

At a minimum, for groundwater, water quality parameters for common ions, nutrients, heavy metals (total, dissolved, or total recoverable concentrations), pH, specific conductivity, and static groundwater levels should be addressed as recommended by the [illegible] Department of Health and Environmental Sciences, Water Quality Division, and Subdivision Bureau.

The quality of surface water in Seven Mile Creek may vary by season. Thus, water quality sampling should be conducted during high and low flow periods to determine seasonal changes related to dilution from snowmelt or other variations. The monthly flow characteristics for Seven Mile Creek should be evaluated with perspective on seasonal groundwater levels, sediment production, aquatic habitat, and monthly water yield.

The quality of the surface and groundwater downslope from the Fort Harrison sewage treatment lagoons should be monitored and evaluated to determine if the facility is adequately designed, needs additional capacity, is in need of repair, decommissioning, or expansion, in light of future development.

3.6 Cultural Resources

The EA does not provide much information about the history and ownership of the Head Ranch and military affairs conducted at the Ranch. The survey conducted by Gar Wood and Associates should be part of the EA. The document may disclose this information and should include the history and relationship between Fort Harrison and adjacent land use during and after development of the Head Ranch properties.

3.7 Hazardous Materials

Even though Fort Harrison is not a manufacturing facility, the Veteran Administration health care facilities (radioactive materials) and military provisions (within reasonable security), the potential that materials such as fuels and munitions are located on the site at times may suggest a threat to public health and safety. Appropriate containment and training to minimize the risk are part of the operations at Fort Harrison, but some reasonable level of disclosure in this EA may be warranted.

3.8 Socio-economics

The land exchange has several potential socio-economic impacts associated with foreseeable development of the Head Ranch. Most noteworthy is the potential unequitable value or ***Fair Market Value*** of the 'public' land that would entitle to private holding. Where is the public benefit? For discussion, the public loses a substantial asset regardless of technical feasibility, landowner risk, value-for-value streamside property as suggested by the following example:

nd Use	Potential Present Value per Acre	Present Value for Total Acreage
and grazing land (Gruber)	$250	2,149 acres = $537,250
ue irrigated cropland (Head Ranch)	$1,000	667 acres = $667,000
e acre tracts if developed by Gruber	$4,500	430 tracts = $9,675,000
acre tract if developed by Gruber	$4,500	215 tracts = $9,675,000

her socio-economic problems, questions, or issues include:

- Increased taxes due to reevaluation of property values from agriculture to residential
- More pressure on an already over-crowded school district (Kessler)
- Higher traffic and higher road maintenance costs
- Sewage treatment and requests for variances for special water treatment facilities
- Public or domestic water supply
- Fire Protection
- Increased crime and police protection
- Reduction in access to public land
- Conflicts with traffic and the railroad
- Why are the existing Gruber lands undeveloped?
- Are there restrictive problems such as water availability for public or domestic water supply on the bedrock?
- Are there sanitation (sewage) restrictions (related to lack of soil)?
- Is access a problem, either by easement, topography (too steep), or geologic problems for construction through rock?
- Are there grazing allotments affected by the proposed exchange on either the Gruber land or Head Ranch?
- In general, how would existing land uses change as a result of this exchange?

[illegible]
Helena, Montana 59601
(406) 449-0150

February 16, 1995

: Youmans
[illegible] Office
[illegible] of Military Affairs
[illegible] 4789
na. MT 59604-4789

RE: COMMENT on:
Draft Environmental Assessment, December 1994
United States Army Corps of Engineers Head Ranch Land
Fort Harrison Land Exchange

Mr. Youmans:

I am an owner, in fee, of land immediately adjacent to the Ranch Property owned by the U.S. Army Corps of Engineers and antly managed by the Department of Military Affairs, Montana National Guard. My property abuts the Corps lands and is ounded on two sides by the Corps' Head Ranch lands on the east on the south. I have attached a copy of the Head Ranch tion map (page 30 of the Draft EA) with my property identified your reference.

I am submitting comments to you for consideration in preparing final environmental assessment for the Fort Harrison Land [illegible] proposal. In submitting my recommendations, I conclude [illegible] best alternative to preserves the valuable natural [illegible] and yet provide the United States the necessary services [illegible] military operations and for Corps of Engineers operations lternative Five (5) which provides for an outright purchase of s west of Fort Harrison without exchange or sale of the Head h property. If Alternative No. 5 is selected there should be ignificant environmental effects for the use of the Head Ranch s as the current land use will remain unchanged.

I summarize my comments for your consideration as follows:

The Draft Environmental Assessment fails to consider the ronmental effects on Head Ranch surface waters, including the ose for which the United States Army Corps of Engineers owns Head Ranch lands under the Rivers and Harbors Act, 33 U.S.C. et seq. The United States owns the lands for the benefit of navigable waters of the Missouri River, including the water ts on Seven Mile Creek, and irrigation rights on the Harrah h whose source of water is Seven Mile Creek. The final Environmental Assessment should consider the effects on [illegible] water on the Head Ranch property.

2. The Draft Environmental Assessment fails to consider the environmental effects on the Head Ranch ground water, including the groundwater-surface water interface between the aquifer and the Seven Mile Creek watershed. The final Environmental Assessment should consider the effects on ground water on the Head Ranch property.

3. The Draft Environmental Assessment fails to consider the environmental effects on the Bureau of Land Management Lands abutting the Head Ranch to the northwest, including the wildlife and water rights to fulfill the federal purpose for the BLM lands. See Cappaert v. United States, 426 U.S. 128 (1976). Thus, the final Environmental Assessment should consider the effects on the adjacent BLM lands.

4. The Draft Environmental Assessment fails to consider the environmental effects of the proposed land use of the Head Ranch should a land exchange occur, i.e., a proposed subdivision development, as noted in informal conversations with the Lewis and Clark County Planning Office. While subdivision development on those lands within the floodplain may be prohibited under state law (§75-5-101 et seq. M.C.A. and ARM 36.15.101, et seq.), development above the floodplain would also have a devastating effect on the groundwater aquifer in the scratchgravel hills because that groundwater table has been dropping over the period of time that monitoring of the aquifer has been undertaken. The final Environmental Assessment should consider the effects of the proposed land use of the Head Ranch.

5. The Draft Environmental Assessment fails to consider the effects on the wetlands and marshes along the riparian area of Seven Mile Creek. The water table is near the surface over the major portion of the Head Ranch lands south of Seven Mile Creek. Along the creek's riparian area are numerous wetlands with nesting areas for a variety of species of ducks and geese and the area is further used by a number of migratory species as well. There appears to be no consideration given to the effects on migratory birds under the draft EA. The final Environmental Assessment should consider the effects on wetlands and marshes as well as migratory birds which use those wetlands and marshes along Seven Mile Creek.

6. The Draft Environmental Assessment fails to consider the effects on the historical Indian Tepee Rings located along the Seven Mile Creek corridor which may have the potential to substantially alter heritage properties or paleontological remains on the federal lands. The final Environmental Assessment should consider the effects on paleontological remains on federal lands.

7. The Draft Environmental Assessment fails to consider the

ts on Montana's wildlife species, including whitetail deer, ope, fox, and coyote; nor does it consider the environmental ts on song birds, including redwing blackbirds, chickadees, s, mountain blue birds; nor does it consider the effects on o game birds such as ring neck pheasant and Hungarian idge. All of these species have been observed to use the Mile Creek riparian corridor on a regular basis for feed, or and/or migration between the Bureau of Land Management to the northwest and the Mount Helena and Forest lands to the east. Therefore, the final Environmental Assessment should der the effects the proposed action will have on Montana's ife species.

For the above reasons, as well as to meet the operational of the Montana Army National Guard and the purposes of the Corps of Engineers, the proposed action should select native Five which requires an outright purchase the additional sary lands. A full and complete review under the procedures he National Environmental Policy Act should reveal the best native to be number five: purchase outright the inholding n the perimeter outlined in the draft Environmental ssment, Figure 5, and retain the Head Ranch property. If native 5 is selected, all appropriate Army National Guard ing goals are met; the purposes of the Army Corps of Engineers the Rivers and Harbors Act are met; the surface water and dwater of the Head Ranch Property is not compromised thus the eds of county planning and state law are met; and critical at and wildlife migration routes are preserved.

I thank you for the consideration given to these critical s in planning for the future use of the Head Ranch lands. If e of further assistance, do not hesitate to contact me.

Yours truly,

Candace F. West

CANDACE F. WEST

Adj[illegible] General, Maj. Gen. John Prendergast
Cap[illegible] Steve Martinka, Army National Guard
Uni[illegible] States Senator Max Baucus
United States Senator Conrad Burns
United States Representative Pat Williams
Senator Tom Beck
Representative Ed Grady
Michael McHugh, Lewis and Clark County Planning Department
Lewis and Clark County Commissioner

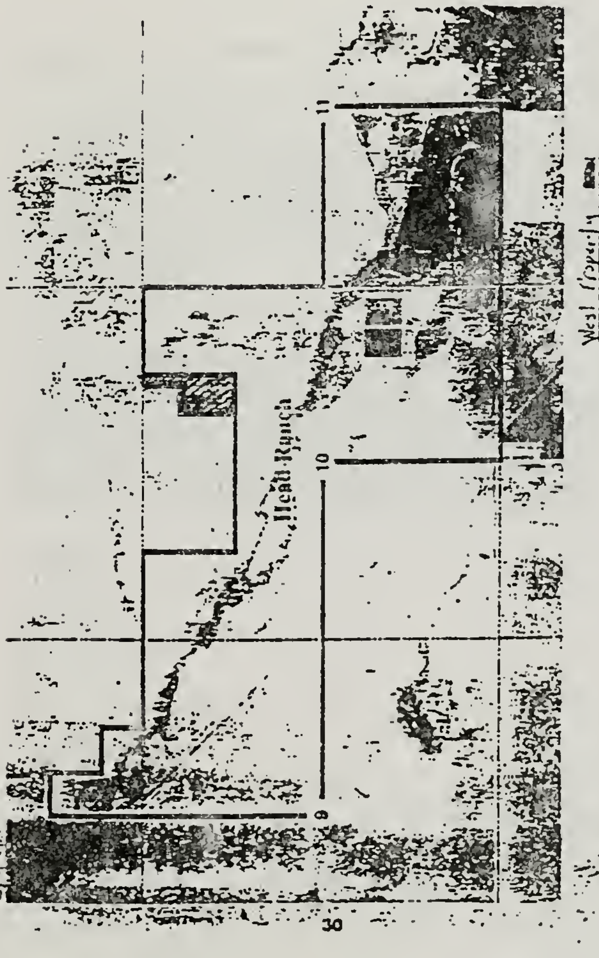


Figure 2.
Head Ranch Location. Boundaries of Head Ranch are highlighted. Lewis and Clark County, Montana 1994

1995

al Office
Youmans
534-4789

Mr. Youmans:

like to offer public comment regarding the proposed land
between the Montana Army National Guard and Mr. Frank Gruber
currently used as rifle ranges and the Head Ranch.
enter my comments into the public record for this proposed
swap.

I would like to go on record in support of 2.1.4
native No. 5) as the most logical course of action for the
Army National Guard and the Public. This alternative
mitigate all of the concerns that I can identify. My
led comments follow:

al Comments on the Proposal

believe that a swap of property in the firing range zone
Harrison for the Head Ranch property is good public
y. When looking at land swaps of this type it is imperative
we look at what is in the public interest. Currently the
range properties owned by Mr. Gruber are not prime
ential properties. There are problems with access to the
rty, and their proximity to the firing ranges at Ft.
son raise a serious question about public health and safety.
ten years as a member of the Helena/Lewis and Clark County
lidated Planning Board and Helena Zoning Commission, public
and safety concerns were always crucial to any planning
and ultimately were mitigated prior to any approval for
ential subdivisions. During my tenure on the board the
of the board and ultimate recommendation to the County
ssion would not have been to locate any residential
vision in any proximity to a known health hazard. Clearly
firing ranges in existence at Ft. Harrison would constitute a
health hazard. I would be greatly surprised if Lewis and
county would knowingly approve and assume the liability for
val of a residential subdivision in any proximity to a live
range of this type.

ly believe in an individual's right to develop their
rty, so long as it does not endanger any other citizen or
ve another citizen of their rights. The development of the
r property used for live fire ranges, or within the safety
for these ranges would clearly endanger individual's who
used the property. In my opinion, Mr Gruber made the
ion to lease the property for the purpose of a live firing
for the past several years. It would be extremely difficult

for him to argue that he has been or would suffer damage by the continued operation of those firing ranges. He made a prior decision to utilize his property for those purposes and he must accept the consequence of his action and his overall reimbursement for using the land for those purposes.

I also firmly believe that given the history of this property Mr. Gruber can not argue or dispute the continued operation of live firing ranges in this proximity. It was through his action that the live fire ranges were able to operate, and he cannot now argue that continued operation of the ranges would deny him his property rights.

Lastly, even if a subdivision were approved on the subject property, what steps would need to be taken to ensure that lead contaminates and other live fire range by-products in the soils from countless years of live firing activities would be cleaned up? If the subject property is downgrade from the firing ranges it would seem that water well monitoring and surface runoff mitigation measures would need to be taken to the extreme to ensure that future residents would not be subjected to exposure from lead concentrations in the air and ground water. I can not believe that Lewis and Clark county would assume the liability of approving a subdivision in this area, or could ensure the mitigation of the problems from by-products of the live fire ranges. It would not appear to be good public policy to site residential subdivisions in this area. That is what comprehensive planning is all about.

When looking at the Head Ranch property as an exchange there is clearly a difference in value. The Head Ranch property contains prime agricultural or grazing property in an agricultural area. The property has been leased for the purposes of hay production for a number of years. The property is also a wildlife corridor for a varied number of wildlife species. The proximity of the Head Ranch to an Administrative Game Preserve for the Department of Fish Wildlife and Parks is also a cause for concern for wildlife habitat.

Contrast the Head Ranch property with property of significantly lower aesthetic value sited next to a live fire range and you have a clear difference in value. Would exchange of these properties benefit the public?

Agricultural and open space property in the Helena valley is clearly becoming scarce and we as the public need to do what we can to protect what remaining agricultural/open space property we have. If this land swap was subject to an irrevocable agricultural covenant or other agreement to maintain the property in it's current agricultural state into perpetuity then you would likely find less opposition to a swap. Leaving the swap without any conditions would subject the property to residential subdivision development which would have negative impacts on neighboring family ranches, wildlife and remaining open space.

idential development of this property is not in the best
erest of Ft. Harrison or the Mt. Army National Guard.
rent use of the Ft. Harrison property for helicopter flight
ining and live fire ranges would be endangered by additional
idential development in the area. Currently most residents in
area tolerate the National Guard helicopter flights.
reased residential development at a higher density would
ely increase complaints at a significant rate and may cause
eventual elimination of these activities.

reased development in the area would no doubt have a negative
act on the Schatz Ranch, one of the few viable family ranches
the West Helena valley. The introduction of dogs, children (
associated safety problems), and increased vehicle traffic in
area would contribute to the eventual decline of this ranch.
minating or endangering agricultural properties is clearly not
goal of comprehensive planning in Lewis and Clark County or the
lena valley.

summary, I do not feel the land swap as proposed would benefit
general public or citizens of Lewis and Clark county. The
rrent swap as proposed would potentially destroy the
ricultural viability of the Head Ranch and surrounding areas
thout careful mitigation and covenants. Clearly, as proposed,
Gruber would benefit by obtaining property with much more
sthetic and economic value. While that may make the swap more
asonable as viewed in isolation, in my estimation that does not
nefit the public as a whole.

e current live fire ranges as situated at Ft. Harrison have
en in operation for decades. They are appropriately sited.
fficient safety mitigation measures have been implemented, and
do not think there is a question concerning their continued
eration. The question becomes is it better to swap property or
rchase the property outright. I vote for purchasing the
operty.

ecific Comments on Alternatives

1.1 No Action Alternative (Alternative No. 2)

do not feel that some form of real-estate development would
our the no action alternative. There are sufficient
blic th, safety, and access concerns to deny any
bdiv n activity in this area. Your assumption that ending
e lease with Mr. Gruber will result in residential development
es not seem founded in good planning sense.

1.2 Land Swap for Gruber Property Only (Alternative No. 3)

does not make sense in terms of a land swap to decrease the
ount of lands acquired in the swap. The public should be
aranteed the greatest acreage swap possible, and the mitigation

of any future landowner/government problems if a land swap occurs.

2.1.3 Land Swap for Gruber Property plus All Inholdings (Alternative number 4)

Clearly the public should benefit to the greatest degree in any land exchange, without damaging the property holder making the swap. The appraisal of the subject properties should be carefully reviewed to ensure that all potential uses of the property are examined, in addition to the highest and best use. Too often appraisals are done in isolation of the assumed highest and best use. A detailed study of all uses and the associated values to the public should be conducted in determining the value of subject properties.

2.1.4 Outright Purchase of All Inholdings, Retain Head Ranch (Alternative No. 5)

This alternative makes the most sense. The property owner is reimbursed at market value for their property, thus suffering no damage. Lewis and Clark County, the residents of the Helena Valley, and the Federal government are best served by maintaining the Head Ranch property. Once the Head Ranch property is removed from public ownership, it could not be restored to it's current state. Development of the property in any use other than agricultural or open space would have a negative impact on the Helena valley, the citizens of Lewis and Clark County and Ft. Harrison. The property should be retained in public ownership and Mr. Gruber should receive fair market value for his property.

Sincerely,

Scott Buswell
2765 Country Club Ave.
Helena, MT 59601

CC:

Congressman Pat Williams
attn: Joe Lamson
P.O. Box 1681
Helena, MT 59624

Lewis and Clark County Commissioners
Blake Wordell
Mike Murry
Mike Griffith
P.O. Box 1724
City County Building
Helena, MT 59624

Lewis and Clark County Planning Board
Attn: Bob Rasmussen
P.O. Box 1725
City County Building
Helena, MT 59624

[illegible] Affairs
[illegible]ntal Office
4789

MT 59604-4789

[illegible]s:

[illegible] in regard to the draft environmental assessment (EA) [illegible] your agency for the land exchange between the [illegible] (Head Ranch) and a private developer.
[illegible] resident of the Scratch Gravel hills for the past 10 [illegible] have seen many changes due to the extensive [illegible]. The water table has constantly been going down, [illegible] from the traffic, rougher roads due to the [illegible] traffic.
[illegible] certainly don't see that a large residential [illegible]ment isn't going to be without additional [illegible] the area.
[illegible]at will the impact be on our water supply, [illegible], roads and schools? these items [illegible] are very important to any community & deserve [illegible] study & development.
Therefore would be in a better position to [illegible] with the land exchange if more information [illegible]

[illegible]fully, [illegible], 220 Blue Crane Rd, Helena MT 443-7714

Terri Lerum
2811 Birdseye Rd
Helena, MT 59601
February 15, 1995

Department of Military Affairs
Environmental Office
PO Box 4789
Helena, MT 59604-4789

Dear Sirs:

I wish to express my concerns regarding five proposals your department is currently considering in an attempt to obtain additional property. I understand some of these proposals involve land exchanges.

As I understand, the property proposed for exchange is approximately 667 acres whose prior owner was the Head Ranch. As an adjacent land owner I have several concerns if the property is exchanged. If the property should be exchanged to a land developer the land very likely will be subdivided and sold. Subdividing would have a major impact on water quality, roads and schools. The natural habitat would be greatly altered. The draft environmental assessment does not address these issues.

[illegible]port proposal five and the outright purchase of the [illegible]ed property. Thank-you for this opportunity to express my concerns.

Sincerely,

Terri Lerum

(Sample letter response to draft EA public comment. [illegible] put in your own handwriting and be encouraged to add your own response as a property owner. This sample represents the most important issues to be responded to in the simplest format—but please, do respond in writing!)

(date) 2-15-1995

Department of Military Affairs
Environmental Office
PO Box 4789
1100 North Main
Helena, MT 59604-4789

Dear Sirs:

The draft environmental assessment (EA) prepared by your agency regarding the Head Ranch property land exchange fails to address the consequences of trading that property to a private developer. I am persuaded that the proposed action would have significant adverse consequences for the Head Ranch and the surrounding area, including harmful effects on wildlife, water, roads and schools. Before the proposed action is considered further, these potential adverse effects must be evaluated in accordance with requirements of NEPA and MEPA.

After considering the proposed alternatives I support ALTERNATIVE #5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only one which avoids future land use conflicts.

Sincerely,

(Signature) Donald Hellhake
(Address) 550 Sunny Vista Road
(Phone) Helena, mt. 59601
406-443-4460

2/15/95

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59604-4789

Dear Sirs:

It appears that the draft Environmental Assessment for the proposed Head Ranch land exchange is inadequate. Should the property fall into the hands of a private land developer, which is one proposal, the exchange would have a very negative impact on the area, especially on wildlife, groundwater, surface water, roads and schools. These aspects must be considered in great detail if the land exchange is going to proceed.

Please be advised that I am opposed to exchanging land with a private developer specifically. Alternative 5 is the only acceptable alternative to me since the Head Ranch would be retained for agricultural/ranching use. Thank You!

Sincerely,

James T. [illegible]
James F. Brown
4455 [illegible]

[illegible]
Helena, MT 59601-9460
14 February 1995

RECEIVED

[illegible]

ADJUTANT GENERAL

jor General John E. Pendergast
ana Department of Military Affairs
ironmental Office
) North Main
. Box 4789
ena, Montana 59604-4789

Draft Environmental Assessment (EA)
Montana Army National Guard
Fort Harrison Land Exchange, dated December 1994

r General Pendergast,

My husband and I are property owners at the north end of Head
ve. Since the land exchange proposed in the EA between the
tana Army National Guard (DMA) and a private party (Mr. Gruber)
olves the Head Ranch, which is below us, we would like to take
e opportunity to offer our comments.

We have found several deficiencies involving both technical
socio-economic issues that appear not to be addressed by the
Since a full-scale Environmental Impact Statement (EIS) would
costly in both dollars and delay in resolving these issues, we
not proposing that one be conducted at this time. However,
ld it appear to us in the future that an EIS is required, we
certainly come out in favor of one at that time.

The EA focuses almost entirely on the interests and benefits
the military and does not address the consequences of future
elopment to the property in question. Urban development is a
-button issue as evidenced by recent articles in the Independent
ord series on growth as well as the ongoing comments regarding
owth management (zoning). This is a problem that won't be
ved easily overnight. Is it possible for the DMA to explore
ernatives to this land exchange that would satisfy both parties
well as those of us who stand to be impacted by this exchange?

Because of the concentration on the military mission and the
ortance of Fort Harrison to military personnel and specialized
ining, we feel that it is equally important to address the
hnical, environmental, and economic impacts to the area
rounding the area of the proposed land exchange.

The Sunny Vista area lies directly to the north of the Head
ch and will be impacted if the exchange results in acquisition
[illegible]

for future urban development. Attached is a summary of our
comments to the EA. Thank you for the opportunity to respond.

Respectfully,

Michael A. Crogan

Karen B. Crogan *

* I am responding as a private citizen/landowner. However, I feel it is only proper to inform you of the fact that I am the current President of the Sunny Vista Property Owners' Association. I am not representing the Board in any way, and our comments should not be interpreted as reflecting the position of the Board in this matter.

Enclosure

cc: Lewis and Clark County Planning Department
Lewis and Clark County Commissioners
State Representative Ed Grady
State Senator Tom Beck
Senator Conrad Burns
Senator Max Baucus
Representative Pat Williams

---

closure Page 1

EA Comments

ction 1.3 - Purpose and Need
This addresses the military interests quite extensively while
ly briefly describing the Head Ranch property as having a greater
tential for subdivision, presumably due to the fact that there
e homes north of the property, i.e., the Sunny Vista subdivision.

ction 2.3 - Alternatives
Alternative No. 2 mentions the possibility of using the
mestone Hills near Townsend - could the right-of-way lease with
e BLM be extended to allow year-round access?
Alternatives No. 3 and No. 4 talk about per acre appraisal
lues, which the EA does not adequately address in perspective
th land development prices versus bare land values.
Alternative No. 5 which proposes outright purchase of the
ased lands and retention of Head Ranch. Is it possible that
ere could be a State appropriation if sufficient benefit could be
roven?
Overall, the EA does not address the potential for real estate
velopment and/or other land uses on the associated lands or the
cio-economic consequences of a land exchange on the surrounding
ea. Rather the EA is limited primarily to the consequences to
e military facilities.

ction 3.3
The EA offers insufficient concern towards potential soil
osion should future development occur on the Head Ranch property
cluding the creation of new roads.
Nor is the degradation of air quality in the event of
creased traffic on existing roads or increased particulates from
od smoke, etc. adequately addressed.
We are concerned about potentially higher property taxes, use
strictions, and concomitant problems resulting from increased
affic, e.g., speed, especially should the roads need paving.
The discussion of noise doesn't address changes in noise
vels in the Head Ranch area should the proposed action result in
velopment.
The EA discussion of biological resources ignores the existing
bitat of Head Ranch. There are numerous whitetail deer and we
ave seen red fox, coyote, and antelope. It is a relatively
dist[illegible]d riparian corridor. There is no discussion of the
ver[illegible]fects of development upon the wildlife habitat of Head
anch.
The EA discussion of water resources appears to equate the
ruber land and the Head Ranch by implying that the named USGS
tudy encompasses the hydrology of both parcels. It does not;
erefore, there needs to be an evaluation with respect to water
ality and availability for both the Head Ranch and surrounding
reas (including the Sunny Vista subdivision). As our household
ater comes from a well, potential impact to the aquifer from which
r water is taken concerns us greatly. Also the discussion of the
[illegible]

Enclosure Page 2

fish habitat, irrigation, and water rights for the Head Ranch need to be addressed. The EA does not address the impact of potential change in water use in the Head Ranch area, nor does it address downstream water rights. Water quality discussion in the EA also needs to address seasonal changes along Seven Mile Creek, as well as any potential problems stemming from the existing Fort Harrison sewage treatment lagoons.

We would have liked to read more about the history of the Head Ranch, not only for personal interest but also for the possibility that more information is contained in the Gar survey. Perhaps it should have been included.

Of all the hazardous materials discussed, the potential for buried munitions offers the greatest threat to public safety, and should be addressed in the EA.

The land exchange has several potential socio-economic impacts associated with future development of the Head Ranch. Since this involves "public" land reverting to private holding, where is the public benefit? How valuable is this land to Mr. Gruber?

Other issues/questions include:

1. WATER SUPPLY!!!!
2. Will we have higher taxes due to reevaluated property values?
3. What about the already overcrowded Kessler school?
4. Higher road maintenance costs due to increased traffic
5. Sewage treatment - we're all on septic
6. Fire protection
7. Increased crime and police protection
8. Reduction in access to public land
9. Other undisclosed affects to those of us living nearby

ruary 15, 199

tment of Military Affairs
ironmental Office
Box
0 [illegible] Main
lena, [illegible] 59604-4789

ar Sirs,

I wish to express my opinion and concerns about the oposed trade of the Head Ranch. I don't believe that the AFT Environmental Assessment provided by the Department Military Affairs sufficiently addresses the impacts of a possible subdivision of the land. I am concerned that e property would be developed and that this would have gative impacts in the following areas:

1. The new development would be competing for water with the surrounding property owners (who are already concerned with the falling water table).
2. The deer that live in and daily travel through the area for their water, shelter and food.
3. Additional wear and tear on Head Lane.
4. The additional children who will be attending the area's schools.

I would be in favor of alternative 3 contained in the AFT Environmental Assessment, where the National Guard uld buy the land west of the firing range, and keep the ad Ranch.

ncerely, Richard Clay

04 Head Drive
elena, MT 59601
06) 443-8229

February 15, 1995

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59604-4789

To Whom It May Concern:

We have reviewed the Environmental Assessment regarding the Head Ranch land exchange. The assessment does not address the harm a private developer will impose on the surrounding community by developing the Head Ranch. With only preliminary information about the developers true intent, we support alternatives that keep public/federal/military land out of private interests.

Thank you for considering our opinions.

Sincerely,

Mary Maltese

Jonja Grampa

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59604-4789

2.15.95

Dear Sir:

The draft Environmental Assessment prepared by your agency regarding the proposed Head Ranch land exchange fails to address the consequences of trading that property to a private developer. I am persuaded that the proposed action would have significant adverse consequences for the Head Ranch and surrounding area, including harmful effects on wildlife, water, roads and schools. Before the proposed action is considered further, these potential adverse effects must be evaluated.

After considering the proposed alternatives, I support Alternative 3 as the only one which avoids future land use conflicts.

M. Suarez
Margaret Suarez, M.D.
Chief of Laboratory Service
VAMC Ft. Harrison MT 59636

February 14, 1995

Department of Military Affairs
Environmental Office
1100 North Main
Helena, Montana 59604

Dear Sirs:

The draft environmental assessment prepared by your agency regarding the Head Ranch property land exchange does not address the consequences of trading the property to a private developer. Having lived on upper Head Lane for the past 19 years, we are convinced that the proposed action would have significant adverse impact on water, schools, roads, and of primary concern, the wildlife. The number of people that have moved into the area in the last 10 years has already had a significant impact on each of those areas.

I strongly support purchasing the property desired by the National Guard and retaining the Head Ranch.

Sincerely,

Chuck & Carolyn Doering
5831 Head Drive

[illegible] of Military Affairs
ironmental Office
Box 4789
North Main
lena, MT. 59604-4789

ar Sirs;

The draft environmental assessment (EA) pared by your agency, regarding the ad Ranch property land exchange fails dequately address all of the consequences rading that property to a private developer. this property were to be developed as posed, significant adverse consequences uld be suffered by those persons presently ng near this area, the abundant wildlife call this home, the already pressured ool districts (districts one and two) and by yourselves at the Department of litary Affairs.

That property North of seven mile ek lies in the same area of ground ter that the Sunny Vista subdivision ws water from. These wells have en dropping every year – there is not enough ground water to supply the existing homes in this area, and any new development would be disastrous.

A portion of the property is located in an area of very high water table and would not be approved for a septic system.

If this land were to be traded to a developer the National Guard would never again be able to use it for training, ever. I live in this area and frequently observe such training.

I urge you to leave this area intact and choose alternative # 5 (purchase of the additional property leased by the National Guard and retention of the Head Ranch), as this would avoid future land use conflicts.

Sincerely,
Stephen P. Weber

Stephen P. Weber
610 Franklin Mine Rd
Helena, MT. 59601

---

uary 16, 1995

. of Military Affairs
ronmental Office
ox 4789
North Main
na, MT 59604-4789

Sirs;

uld like to comment on the EA prepared by your agency rding the Head Ranch property land exchange.

The EA fails to evaluate the impacts of the proposed action wildlife movement. The Head Ranch is a major wildlife ridor particularly for whitetail deer moving between the tongravel Hills and the Green Meadow Wildlife Refuge.

The EA fails to evaluate the impacts to ground water from the asonably foreseeable" development of the Head Ranch. A rate loading analysis from septic systems should be done to ermine impacts to groundwater and surface water quality.

Development of the Head Ranch is reasonably foreseeable. refore the impacts of this development must be evaluated in EA.

Because of the proposed action's impacts to water, wildlife, traffic on Head Lane, a finding of no significant impact NSI) cannot be concluded from this EA, therefore an EIS must written.

cerely,

and [illegible]tina Gurrieri
Sun[illegible]sta Rd.
ena, [illegible]9601

2-16-95

TO: Steve Martinka
Dept. of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59604-4789

FROM: William H. Abney
125 Alfalfa
Helena, MT 59601
443-7826

RE: Fort Harrison Land Exchange-Head Ranch

To whom it may concern:

I would like to start by thanking you for taking the time to read my comments and give them some thought.

I believe it would be in the best interest of your department to have a public hearing and let the people of the community voice their opinions. The ad that was run in the Independent Record smelled of skunk if I've ever smelled one. That is the type of ad that causes the public to ask what you are trying to hide.

I would like it to be known that I oppose a subdivision on the Head Ranch. If the subdivision does come to be I would like to know if the land swap is equitable for the hillside ground that Frank Gruber is trading. There is a good chance that someone would trade the land and make a rifle range for the price of the Head Ranch.

I definitely feel that in addition to the public hearing an appraisal should be done. The results of this appraisal should be made public if the land swap takes place.

Sincerely,

William E. Abney

Sherry L. Myhre
863 Sunny Vista Road
Helena,
406-442-4109

y 10,

ent of Military Affairs
mental Office
4789
orth Main
MT 59604-4789

oposed Head Ranch Property exchange

rs:

ft Environmental Assessment prepared by your agency regarding the
anch property land exchange does not explore the overwhelming
uences of placing this land in the ownership of a private developer. I
ke to ask that the Department of Military Affairs investigate this proposal
re thorough manner.

hat are not discussed in the Draft EA include some that will effect myself
operty owner and the long range environmental balance of the entire
e, Paydirt and Scratchgravel areas. I would like to address some of the
hat I feel are important and should be investigated.

ter rights that are assigned to the Head Ranch area are significant. No
n was made in the Draft EA how those water rights would be handled.
e previous to the water rights of the Sunny Vista Water Users
tion and the Paydirt area water users association. Subdivision use of
ater rights would effectively eliminate water available to the current
sers during many summers. How will this be apportioned?

nny Vista area currently has several wells on properties that go dry
dry years. We have been watching our well levels fall steadily for
l years. Development of the property in the Head Ranch would mean
sage within some of the same water tables....and a certain burden to the
depleted source. This has not been addressed in the Draft EA.

hools serving this area are Kessler Elementary, CR Anderson, and
High School. Kessler Elementary is especially overcrowded, yet each
e schools lament the lack of space, facilities and equipment due to the
opulation growth and inability to pass levies. Additional development in
ea would most certainly be met with increased burden on the school
. Has this been discussed in the Draft EA? Is the Helena School district
ed to take on this responsibility?

The condition of the county roads, namely Head Lane and Franklin Mine Road have been deteriorating steadily as the population rises. The county is unable to provide the continuous service needed to keep the roads in condition for the number of residents who use it now. Additional development would mean disaster or surely rising costs for the county and the taxpayers to provide roads to meet those demands. This issue was not mentioned in the Draft EA.

There are several deer herds, antelope, fox, coyote, raccoon, skunks, many species of birds, and numerous other types of animals that depend on the habitat and water of the seven mile creek area on Head Ranch. During the winter animals that reside in the Scratchgravel Hills come to the Head Ranch to feed and most importantly, water. During cold weather the creek in that area offers the only open water for many animals for miles around. Does the Draft EA address what will happen to those animals?

In all our dealings with the Water Rights officials of Montana it has been essential that any ditch irrigation use and maintaining be done in a manner that does not disturb or effect any part of the Seven Mile Creek in any adverse manner. It seems incredible to think that building houses, septic tanks, wells, roads, and community services in this area can be done without impacting the creek and water quality. The Draft EA does not address this issue.

The effects of this proposed transaction effect many people, a significant area of our community and some very fragile lands and animal populations. I feel very strongly that the proposed action would have significant adverse consequences for the Head Ranch and the surrounding area. Before the proposed action is considered further, I would ask that these potential adverse effects must be evaluated in accordance with requirements of NEPA and MEPA. I am asking that an environmental impact study include the concerns of the current residents of the the surrounding area. I feel that the actions that take place should be announced well in advance of the final dates (unlike this activity which was announced only 1 month previous to the deadline), be announced in a manner so that the entire community is aware of what is underway, and that a public hearing be held. I feel that ALTERNATIVE #5 of the Draft EA is the only alternative which avoids future land use conflicts.

Sincerely,

Sherry L Myhre

Sherry L. Myhre
863 Sunny Vista Road
Helena, MT 59601
406-442-4109

cc:
L&C County Planning Department
Lewis and Clark County Commissioners
US Senator Conrad Burns
State Representative Ed Grady
Senator Max Baucus
Representative Pat Williams
State Senator Toni Beck

---

ebruary 14, 1995

epartment of Military Affairs
nvironmental Office
O. Box 4789
00 North Main
elena, Mt. 59604-4789

ear Sirs,

aving recently become aware of your proposed trade of the property nown as "The Head Ranch" to a private party, I am writing this etter to express my deepest concern. The draft environmental ssessment which you have prepared fails to address the potential mpact of trading the subject property to a private developer. hese impacts are potentially devastating to wildlife, water esources, roads and schools. Failure to consider such onsequences prior to proceeding with the proposed swap would urely constitute violation of Federal and State environmental egulations. That issue aside, there is clearly no benefit to the ommunity in the potential destruction of what is now a relatively isolated natural drainage environment

iven the proposed alternatives, that which has been identified as LTERNATIVE # 5, is clearly the superior choice. That is, etention of the Head Ranch property under Federal ownership while urchasing outright the property, which the National Guard desires. hope you will proceed cautiously in this matter and assure that ou take the course which will retain the rural character of the ort Harrison vicinity as much as possible. Thank You.

incerely,

Bonnie McElroy

onnie McElroy
87 Sunny Vista Road
elena, Montana, 59601
49-4547

C: State Representative Ed Grady
Senator Conrad Burns
Senator Max Baucus
Representative Pat Williams
Michael McHugh (L & C County Planning)

February 15, 1995

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, Montana 59604-4789

Dear Sir:

The draft Environmental Assessment prepared by your agency regarding the proposed Head Ranch land exchange fails to address the consequences of trading that property to a private developer. I believe that the proposed action would have significant adverse consequences for the Head Ranch and surrounding area. These would include: harmful effects on wildlife, water, roads, and schools. Before the proposed action is considered further, these potential adverse effects must be evaluated.

Upon completion of reviewing the proposed alternatives, I support Alternative 5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only one which avoids future land conflicts.

Sincerely yours

Edwin L Baum
4470 Paydirt Drive
Helena, MT 59601

[illegible]
of
[illegible]ildlife & Parks

Helena Resource Area
1404 Eighth Avenue
Helena, MT 59620

February 15, 1995

ment of Military Affairs
nmental Office
Steve Martinka
ox 4789
, MT 59604-4789

e: Harrison Land Exchange - Draft EA

r. Martinka:

you for this opportunity to comment on the proposed Head Lane
xchange. Depending upon the actions on this project a wide
of possible consequences could occur for wildlife. The most
cial circumstance would result if Alternative 2.1.4 Outright
se of All Inholding, Retain Head Ranch were selected as the
Alternative. This alternative would accommodate the needs
dlife more directly than the No Action Alternative (2.1.1).

g that pressures upon wildlife habitat are significant in the
Valley, it would be in the best interest of this pubic
ce if lands that have been in public ownership remain so.
urrent subdivision trends on private lands severely and
ently compromises the future of wildlife. If Alternative
were selected, it seems that existing and future wildlife
t needs could be accommodated to some extent within the
ions of the Montana Army National Guard.

ovided previously in scoping comments, we have serious
ns over subdivision impacts to wildlife in the Helena Valley.
ed Lane property, occurring as it does along Sevenmile Creek,
ubby riparian habitat in an otherwise open sagebrush/prairie
ity. It is essentially an island of relatively undisturbed
t between Mount Helena and the Scratchgravel Hills, which
s a major wildlife movement corridor across between parcels
lic land. We should reiterate that the Blue Cloud property
rlong habitat for 200-300 mule deer and winter habitat for
imately 70 elk.

From a wildlife perspective, the best alternative would be Alternative 2.1.4 Outright Purchase of All Inholding, Retain Head Ranch, and then No Action Alternative. If the exchange does occur, a conservation easement to protect wildlife habitat on the Head Lane property would help ameliorate impacts to wildlife.

Thank you for this opportunity to comment.

Sincerely,

Gayle Joslin

Gayle Joslin
Wildlife Biologist

c: Joel Peterson, Wildlife Manager

2, 1995

tment of Military Affairs
nmental Office
ox 4789
North Main
a, MT 59604-4789

Sirs:

We are writing you to express our concerns about the proposed land
with Mr Gruber (Head Lane Ranch for Land West of the firing
. We are extremely concerned about the subdivision and building
would occur on the Head Lane property should it fall into private
: The current water aquifers are stressed and additional
opment will likely cause our wells to go dry. The E.A. you provided
d old studies and the data is obsolete. We feel that the water
and quantity must be studied in view of the almost certain
vision and development which will take place if Mr Gruber obtains
nd.

In addition the Head Ranch area is the home to numerous wild
ls which must also be considered. Any swap should entail placing a
rvation easement to protect the stream bank and prevent
opment in the riparian habitat areas. The animals that live in the
area use the water and cover year round for survival. This corridor
ver should be maintained if at all possible.

Other areas which need to be addressed are the Head Lane access
(which is constantly in a poor state of repair) and which would only
orse with more usage. Kessler School (which is over crowded and
funded) would be over run with additional students that they can not
e. The hard fought battle with Montana Rail Link to upgrade our
ing h[illegible]ly just been accomplished and additional usage will only
it ou[illegible]r.

As we see it the federal government should not be subsidizing a
te developer in his plan to get rich. If this swap goes through it will
fecting much more than just your firing range. The value of the Head
Ranch should be based on it's value as prime subdivision land and
[illegible]

balanced against the value of the firing range grassland and coulees which are not nearly so valuable. You must be sure to get good value for our tax dollars

In summary, if you still plan to swap the land, we feel that you must at a minimum ensure that conservation easements are placed on the property, that lot sizes are large enough to prevent pollution to the Creek and the aquifer and to prevent excessive drainage of the aquifer, and make sure the value of the Head Ranch has been determined as a subdivision and not as agriculture land because that is what it will become. Please weigh the matter carefully and reconsider what development will do to the area in addition to the concerns you have about your firing range. Thank you for your attention

Sincerely

Mark and Lenore Adams
732 Corral Road
Helena, MT 59601
(406) 442-2532

cc to
Lewis and Clark County Planning Commissioners
Lewis and Clark County Planning Department C/O Michael McHugh
State Senator Tom Beck
State Representative Ed Grady
Senator Conrad Burns
Senator Max Baucus
Representative Pat Williams
Major General Pendergast
US Army Corps of Engineers
The Helena Independent Record

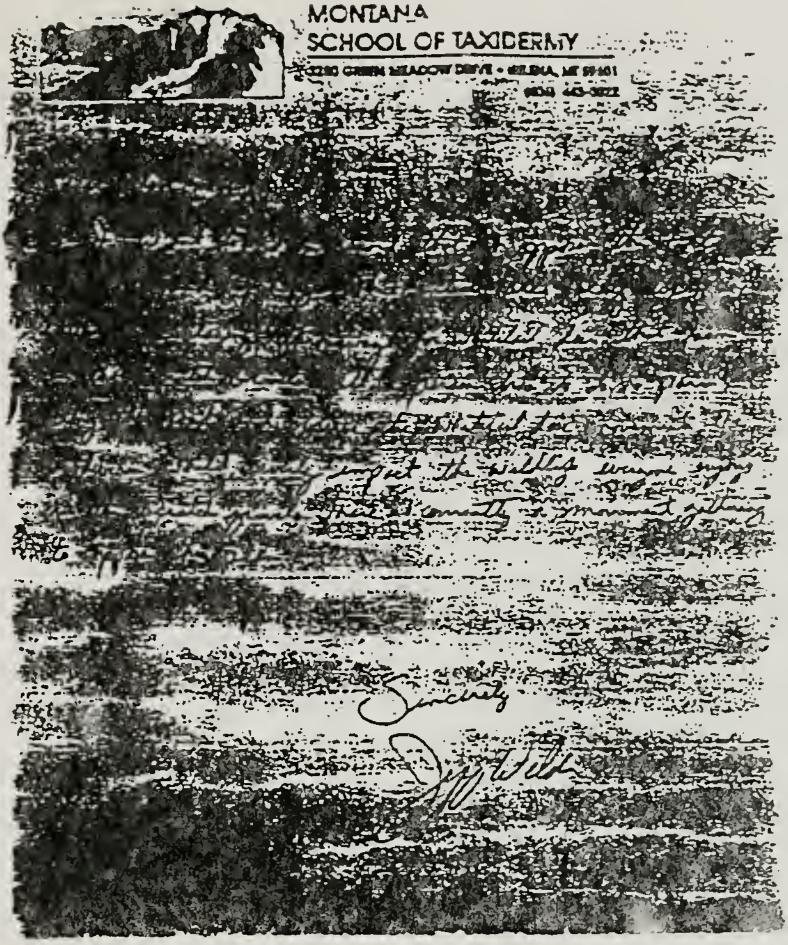
-litary Affairs
-tal Office
- 4789
- Mt 59604-4789

Re: Land Exchange Involving the Head Ranch

[illegible] writing to comment on the proposed exchange of land
[illegible] Ft. Harrison and Frank Gruber. I think this is a
[illegible] idea. If the military wants the Gruber land they
[illegible] buy it from him. There is already too much subdivision
[illegible] land that is [illegible] now. We definitely should not be
giving over federal land to a private developer who
[illegible] almost certainly subdivide it:
- The schools in this area are full.
- The county doesn't have enough money to properly maintain the roads even as the situation is now.
- The aquifer may be inadequate to sustain more development
- wildlife habitat would be severely affected.

[illegible] 5 as outlined in the Environmental Assessment [illegible] listed. I oppose this land exchange and can't imagine how anyone can consider such a thing.

Len Mitchell
4440 Fayoint Dr
Helena Mt. 59601



MONTANA
SCHOOL OF TAXIDERMY
2280 Green Meadow Drive • Helena, MT [illegible]
(406) 443-[illegible]

[illegible]

impact the wildlife [illegible]

[illegible] currently [illegible]

Sincerely

Dept of Military Affairs
Environmental Office
P.O Box 4789
Helena, MT
59604-4789

Dear Sirs,

It has been brought to my attention that the current Head Ranch property may be exchanged by the National Guard to a private developer for holdings elsewhere. As property owners in the Sunny Vista area, we are quite concerned about the impact that private development of this property would have on water resources, wildlife, schools and roads in our area.

We understand that there are several other alternatives available to the Guard to consolidate their holdings. We would prefer alternative five which would provide for purchase of the desired property outright and preserve what remains of the Head Ranch property in its current state

Thank you for your attention and consideration

Kim Samreed
53 Cloverview
Helena MT

February 15, 1995

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, Montana 59604-4789

Dear Sir:

This letter is written in response to your agency's draft environmental assessment regarding the proposed Head Ranch land exchange.

My concerns center on future land use conflicts, and on consequences which would likely result from trading that property to a private developer. It is felt that the proposed action would have significant adverse impacts for the Head Ranch and for surrounding areas, such as harmful effects on water, wildlife, roads and schools. I feel that the draft EA has inadequately addressed these issues, and that such potential adverse effects should be evaluated before the proposed action is considered further.

I have reviewed the proposed alternatives to the land exchange, and favor Alternative 5 (purchase of the desired property by the National Guard and retention of the Head Ranch).

Sincerely,

Todd Damrow

Todd Damrow

2/14/95

Dear Sirs:

I am writing regarding the proposed land exchange with Gruber along Head Lane. I think there would be pretty significant impacts to roads and traffic, groundwater, open space, the Kessler school, to name just a few. You should do an EIS on that proposal so you can give us a chance to better explain (and think about) the impacts, and so you can also consider various alternatives and get the best possible deal for you and for the whole area too.

Sincerely: [illegible] Jones
740 Gilder
Helena

Department of Military Affairs
Environmental Office
P O Box 4789
1100 North Main
Helena, Mt 59604-4789

Dear Sirs;

The draft environmental assessment (EA) prepared by your agency regarding the Head Ranch property land exchange fails to address the consequences of trading that property to a private developer. I am persuaded that the proposed action would have significant adverse consequences for the Head Ranch and the surrounding area, including harmful effects on wildlife, water, roads and schools. Before the proposed action is considered further, these potential adverse effects must be evaluated in accordance with requirements of NEPA and MEPA.

After considering the proposed alternatives I support ALTERNATIVE #5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only one which considers future land use conflicts.

Sincerely,

Reinhart J. Kuntz
775 Tredine Trail
Helena Mt. 59601

442-7497

rtment of Military Affairs
vironmental Office
O. Box 4789
0 N. Main
lena, MT 59604-4789

ntlemen
I am writing to you regarding
e draft environmental assessment
epared by your agency.
The assessment fails to address
e consequences of trading the Head
anch property to a private
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The proposed action would
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lternatives, I support Alternative
5 (purchase of the property desired
y the National Guard and retention
the Head Ranch) as the only one which
voids future land use conflicts.

Sincerely
Marty Anderson
209 Sunny Vista, Helena, MT 59601 (406) 442-415

Department of Military Affairs
Environmental Office
P O Box 4789
Helena, MT 59604-4789

Dear Sir,

The Draft Environmental Assessment prepared by your agency regarding the proposed Head Ranch land exchange fails to address the consequences of trading that property to a private developer. I am persuaded that the proposed action would have significant adverse consequences for the Head Ranch and surrounding area, including harmful effects on wildlife, water, roads and schools. Before the proposed action is considered further, the potential adverse effects must be evaluated. My property borders the land you propose swapping and knowing this property know this is a prime habitat for wildlife, and with high water suspect future problems with septic and domestic water usage.

After considering the proposed alternatives, I support Alternative 5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only one which avoids future land use conflicts.

Sincerely,

[illegible] Ennander
444 Alfalfa Rd.
Helena, MT 59601

James E. Elliott
615 Blue Grouse Road
Helena, MT 59601
406-449-3075

Feb 95

epartment of Military Affairs
nvironmental Office
O Box 4789
100 North Main
elena, MT 59604-4789

ear Sirs:

would like to address a few additional areas regarding the Head
anch Property land exchange. I am concerned about the Veterans
dministration Sewage Lagoon. This lagoon produces a real foul odor
various times. If this land was developed, would the adjacent land
wners end up having a law suit filed in court to close down the
wage lagoon? If this was to happen, what effect would it have on
e VA center and National Guard Post? This has happened in the
ast to several businesses in the Helena area.

he water table is quite high in much of this area. When the ranch
the south irrigates during the summer, it is even higher. There is
G.W. well along Head Drive, in the area of the old barn, that has
een measured by The USGS in their study of the Helena Valley G.W.
udy. The water table in this area is only a few feet below ground
urface.

Ve ha[illegible] measuring a selected number of ground water wells in
e adjacent Sunny Vista area for the past couple of years. If a new
ubdivision was developed on the Head Ranch property and our
round water table was to start dropping rapidly, there would be a
w suit filed.

he Head Ranch has first water right on Seven Mile creek (125
ches). What will happen to this water right if this area was
ubdivided? Some of the old timers have said this water right was
ed into the VA center.

Nothing has been said about the whitetail deer herds that live on this old ranch. What will happen to them if this area is subdivided?

The Head Ranch area does support a lot of training for the National Guard. It is close to the post and provides some terrain not found on adjacent areas. Also in this day and age it would serve the National Guards best interest to try and get along with its adjacent land owners. The guard benefits from friends not enemies.

It is with these thoughts in mind that I support ALTERNATIVE #5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only one which avoids future land use conflicts.

Sincerely,

James E Elliott
James E. Elliott
615 Blue Grouse Road
Helena, MT 59601

cc

The Montana National Guard
Lewis and Clark County Commissioners
US Senator Conrad Burns

ebruar 1995

rtment of Military Affairs
ronmental Office
ox 4789
North Main
ina, MT 59604-4789

: Sirs:

draft environmental assessment (EA) prepared by your agency
rding the Head Ranch property land exchange fails to address
consequences of trading that property to a private developer.
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erse consequences for the Head Ranch and the surrounding area,
luding harmful effects on wildlife, water, roads and schools.
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erse effects must be evaluated in accordance with requirements
NEPA and MEPA.

er considering the proposed alternatives, we support ALTERNATIVE
(purchase of the property desired by the National Guard and
ention of the Head Ranch) as the only one which avoids future
d use conflicts.

cerely,

o E. Mahoney
Head Drive
ena, MT 59601
ne: (406) 442-3796

Shirley Ann Mahoney
Shirley/Ann Mahoney
5604 Head Drive
Helena, MT 59601
Phone: (406) 442-3796

Lewis and Clark County Planning Dept. c/o Michael McHugh
Lewis and Clark County Commissioners
State Representative Ed Grady
State Senator Tom Beck
Senator Conrad Burns
Senator Max Baucus
Major General Pendergast
Representative Pat Williams

---

jor General Gene Pendergast
O Box 4789
rt Harrison
lena MT 59604

February 12,1995

ear Major General Pendergast,

am writing you in regard to the proposed FORT HARRISON LAND EXCHANGE.

'e have a situation where prime public ground is being taken out of the public domain,
d dealt to a private developer. This is being done to fulfill the developers terms for
rocuring his land which is needed to preserve the Fort Harrison firing range.

his public ground is the historic old Head Ranch. The Head Ranch consists of about 700
cres of prime creek-bottom & hay meadows lying on the outskirts of Helena. This is a
ery valuable & rare public lands holding.

he undeveloped Head Ranch is the major contributor to the rural atmosphere of the
urrounding area. The D.E.S. indicates that subdivision of the Head Ranch will occur
fter the exchange transpires. The loss of this undeveloped ranch land to subdivision
would be devastating to the environmental quality of the area. It would be an extreme
urden to the taxpayers in the form of necessary road, bridge, school, fire-protection, and
ll other government infrastructure expansions which cannot be maintained at current
evels. Keeping the Head Ranch in the public domain preserves the rural and much
ought after "old time Montana" quality of the Helena valley.

have personally contacted many people of Helena & not a single person was aware of
he proposed land exchange or public comment period. I learned of the proposal from a
eighbor. I have no doubt that when the people of Helena, the people of Montana, & the
eople of this country (the Head Ranch is Federal Land) are informed of this proposal it
will meet with overwhelming opposition.

firmly oppose any land exchange involving the Head Ranch. I do realize the D.M.A.
eeds it's firing range & support other options of acquisition. If Frank Gruber is planning
n selling his land next to the range anyway, why can't the Fort buy it? Hopefully it is
ot because Mr. Gruber has dictated that the only way the Fort will ever have the ground
s by dealing him the Head Ranch. I have been a building contractor in Helena for 17
ears & [illegible] the Head Ranch to be a multi-million dollar property when subdivided.
This is [illegible] unreasonable land deal. Subdivision or not, exchanging this public land is
not in the [illegible] interests of the public.

Sincerely,

Timothy R. McAlpine

RECEIVED
FEB 14 1995
ADJUTANT GENERAL

February 13,1995

Department of Military Affairs
Environmental Office
P.O. Box 4789
1100 North Main
Helena, Mt. 59604-4789

Dear Sirs:

Having recently become aware of your proposed trade of the property known as "The Head Ranch" to a private party, I am writing this letter to express my deepest concern. The draft environmental assessment which you have prepared fails to address the potential impact of trading the subject property to a private developer. Those impacts are potentially devastating to wildlife, water resources, roads and schools. Failure to consider such consequences prior to proceeding with the proposed swap would surely constitute violation of Federal and State environmental regulations. That issue aside, there is clearly no benefit to the community in the potential destruction of what is now a relatively unspoiled natural drainage environment.

Given the proposed alternatives, that which has been identified as ALTERNATIVE # 5, is clearly the superior choice. That is, retention of the Head Ranch property under Federal ownership while purchasing outright the property which the National Guard desires. I hope you will proceed cautiously in this matter and assure that you take the course which will retain the rural character of the Fort Harrison vicinity as much as possible. Thank You.

Sincerely,

Kenneth McElroy
Kenneth McElroy
887 Sunny Vista Road
Helena, Montana, 59601
449-4547

CC: Ed Grady
Senator Conrad Burns
Senator Max Baucus
Representative Pat Williams
Micheal McHugh (L & C County Planning)

P.O. Box 27
Fort Harrison, MT 59636
7 February 1995

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59604-4789

Dear Sir:

I have read the draft Environmental Assessment describing the proposed exchange of the Head Ranch for land currently leased by the National Guard. The document fails to address the foreseeable effects of this action on the Head Ranch. I am persuaded that the proposed action would have adverse environmental consequences, including harmful effects on water resources, roads, schools, and wildlife.

After considering the proposed alternatives, I support Alternative 5 (purchase of the property desired by the National Guard and retention of the Head Ranch), as the only option that avoids future land use conflicts.

Yours truly,

Spencer Shropshire
Spencer Shropshire

Feb 9, 1995

artme[illegible] Military Affairs
ronmental Office
. Box 4789
na, MT 59604-4789

: Sir:

The draft Environmental Assessment prepared by your agency
rding the proposed Head Ranch land exchange fails to address
consequences of trading that property to a private developer.
a persuaded that the proposed action would have significant
rse consequences for the Head Ranch and surrounding area,
luding harmful effects on wildlife, water, roads and schools.
re the proposed action is considered further, these potential
rse effects must be evaluated.

After considering the proposed alternatives, I support
rnative 5 (purchase of the property desired by the National
rd and retention of the Head Ranch) as the only one which avoids
re land use conflicts.

Thomas E. [illegible]
443 Head Dr
elena Mt 59601

2-9-95

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59604-4789

Dear Sir:

The draft Environmental Assessment prepared by your agency regarding the proposed Head Ranch land exchange fails to address the consequences of trading that property to a private developer. I am persuaded that the proposed action would have significant adverse consequences for the Head Ranch and surrounding area, including harmful effects on wildlife, water, roads and schools. Before the proposed action is considered further, these potential adverse effects must be evaluated.

After considering the proposed alternatives, I support Alternative 5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only one which avoids future land use conflicts.

Bob Charlton
Box 61
FT Harrison MT
59636

---

ruary 9, 1995

partment of Military Affairs
nvironmental Office
. O. Box 4789
100 North Main
lena, MT. 59604-4789

ear Sir,

he draft environmental assessment (EA) prepared by your agency regarding the Head Ranch property land xchange fails to address the consequences of trading hat property to a private developer. I am persuaded that he proposed action would would have significant adverse nsequences for the Head Ranch and the surrounding area, ncluding harmful effects on wildlife, water, roads and chools. Before the proposed action is considered further, hose potential adverse effects must be evaluated in ccordance with requirements of NEPA and MEPA.

fter considering the proposed alternatives I support lternative #5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only [illegible] which avoids future land use conflicts.

[illegible]
[illegible] Head Lane
[illegible]

2/12/95

Department of Military Affairs
Environmental Office
P.O. Box 4789
1100 North Main
Helena, Mt. 59604-4789

Dear Sirs:

The draft environmental assessment you prepared concerning the Head Ranch land exchange proposed by Mr. Gruber fails to address multiple salient issues, regarding the effects of exchanging the land to a person who intends to develop it. You stated that there were no ill effects noted, regarding the National Guard acquiring Gruber's land, but you failed in another regard: As this is federal land, it is subject to a more extensive review process than you have undertaken, including what the effect of developing the traded property would have, in accordance with the requirements of NEPA and MEPA.

I am a resident of the Sunny Vista subdivision. In this subdivision, there have been four wells which have gone dry in the last two years. It may have escaped the notice of the persons who prepared your environmental assessment, but we are years into a drought cycle. The Head Ranch sits on the same formation as the Sunny Vista land, and development of this area will definitely lower water levels higher on the hill.

Area schools are already at, or over, capacity. Adding a development in this area would adversely impact an already bad situation. This area is also home to a considerable quantity of wildlife, which your report failed to adequately enumerate, stating that you supposed that this area had wildlife similar to that found in other areas. I have seen foxes, coyotes, deer, antelope, rabbits and a lion in the area. Seven-Mile Creek runs through the proposed land swap, which raises concerns about preserving the riparian areas; in order to preserve the area's value as waterfowl and wildlife habitat, a wide conservation easement would have to be granted.

The roads in the area, namely Head Drive and Franklin Mine Road, are dirt roads which frequently deteriorate to marginal status. The county has, so far, declined to improve either road. The addition of further traffic to these roads would be irresponsible.

The Upcountry Inn relies for its business on its bucolic location. This would be adversely impacted by a development in the area. The Schatz Ranch would also be adversely affected.

Add into the bargain the historical value of the buildings on the property, and the considerable nuisance value of the VA's sewage settling pond, and the whole proposal becomes ludicrous.

After considering the proposals enumerated in your draft EA, I strongly support ALTERNATIVE 5. It'll make Gruber happy, because he'll get rid of the useless land he bought for the purpose of proposing this swap, and it will preserve the historic and wildlife value of the Head Ranch property. This is the only alternative which avoids future land use conflicts.

Sincerely,

Stanley M. Hall
5770 Sherwood Dr.
Helena, Mt. 59601
449-4724

LEWIS AND CLARK
COUNTY

City County Building
P.O. Box 1724
316 North Park
Helena, Montana 59624
Telephone 406/447-8304

Board of County Commissioners

February 13, 1995

Mr. John B. Wheeler
Department of Military Affairs
P.O. Box 4789
Helena, Montana 59604-4789

Subject: Fort Harrison Land Exchange Draft Environmental Assessment

Dear Mr. Wheeler:

We have reviewed the Draft Environmental Assessment for the Fort Harrison Land Exchange. The County is happy to see that the Montana Army National Guard is making an active effort to prevent future land use conflicts in the areas adjacent to the Fort Harrison complex. Lewis and Clark County would like to go on record at this time to emphatically support the adoption of alternative #5, the outright purchase of all inholdings, and retaining the Head Ranch. There are several general reasons supporting the adoption of this alternative.

1. Neither the Gruber property and inholdings, nor the Head Ranch property are located within a Preferred Development Area, as defined by the Lewis and Clark County Comprehensive Plan (1989). The primary goals of the plan are to provide an efficient level of public services by discouraging scattered development, and to encourage the continuation of agricultural activities. The Plan also states that although development outside the Helena urban area is not prohibited, such development should bear the direct and indirect costs of providing facilities and services. Due to statutory provisions regarding the provision of Sheriff's services, fire protection service, school transportation, and other government services, the County cannot recover those costs associated with urban development in these two areas at this time.

2. Both sites are located outside Fire Service Districts and must rely on the Lewis and Clark County Volunteer Fire Department. By statute, the LCCVFD is required to battle grassland and wildland fires and is not required to battle structural fires. The [illegible]ission would have a very difficult time approving further subdivisions and [illegible]opment in these areas without annexation into a fire district.

3. Another serious concern of the Commissioners is the lack of substantial data and information regarding the long term availability of adequate potable water supplies. Much of the area in both the Gruber property and the Head Ranch areas are underlain by bedrock aquifers. Limited information collected to date, indicates that water quantities for consumptive use are limited in the areas south of the Scratchgravel Hills (Head Ranch Property). It appears that withdrawals are exceeding recharge in the area.

The following specific areas need to be discussed in greater detail in the Environmental Assessment.

Section 2.1.1 No action alternative (#2)
There is no discussion or analysis of the impacts of relocating the firing range to the Limestone Hills and the increase of Army National Guard vehicular traffic on County roads and emergency services.

Section 2.1.2 Land swap for Gruber property only (Alternative #3) and 2.1.3 Land swap for Gruber property plus all inholdings (Alternative #4)
If either of these alternatives were adopted, there would be no replacement area for Veterans Administration sewage lagoons. The lagoons are located within the floodplain. These lagoons are also not lined and have a significant potential for leakage. An adequate replacement should be reserved.

Section 3.1.2 Potential Impacts to Physiography/Geology and Section 3.5.2 Surface Water
There is mention that portions of the Head Ranch property lie within a floodplain. However, there is no identification of the type of flood zone and no indication of the location of the floodplain on any of the figures. Please refer to FIRM Panel 1536 of 1725, Community Panel #300038 1536C, Revised September 4, 1985.

Section 3.4 Biological Resources
There is no mention that the eastern portion of the Head Ranch, Section 11 lies within the Green Meadow Game Preserve. Large number of mule deer winter and fawn within this area. In addition the area provides seasonal nesting and foraging habitat for water fowl and neo-tropical birds.

The northern portions the Head Ranch, located in Sections 9 and 10 are utilized as grazing areas for pronghorn antelope and mule deer. Impacts on wildlife in the Head Ranch area are not discussed.

Section 2.1.3 Land swap for Gruber Property plus all inholdings (#4)
There is no indication whether the Head Ranch would be divided proportionally among Gruber and the other inholders. If this occurred, it could create a number of parcels with vested development rights equal to the current number of private parcels. No County subdivision review would be required, if this took place under the Federal ownership.

ection 3.3 Noise
evelopment of the Head Ranch property as residential would decrease the ability of low-level elicopter flights to avoid residential development and increase the number of sensitive receptors the area. Sound exposure levels between 83 and 92 dBA may lead to negative community eaction.

lease note on page 29, Figure 1, Country Club Avenue has been mislabeled as Spring Meadow rive.

ewis and Clark County appreciates the opportunity to response to the Draft. Again, we would ke to support the adoption of alternative #5.

incerely,

EWIS AND CLARK COUNTY
OARD OF COMMISSIONERS

ichael A. Murray, Chairman

lake J. Wordal, Commissioner

ichael J. Griffith, Commissioner

[illegible] 1995

Depart[illegible] Military Affairs
Envir[illegible] Office
P.O. Box 4789
Helena, MT. 59604-4789

Dear Sir:

This letter is in response to the draft Environmental Assessment prepared by your agency regarding the proposed Head Ranch land exchange. After reviewing this document, I find numerous areas of concern.

The EA fails to address the future impact of trading that land with a private developer. The water issues of the Sunny Vista area are important and would be adversely affected by significant development of the Head Ranch. There are wells in this area that are already concerning, and the aquifer that feeds the lower Head Ranch is the same one.

The Seven-Mile Creek area is significant wildlife habitat and the major source of water for whitetail deer, foxes, racoons, badgers, and other species. The area is also a significant riparian habitat, with populations of heron, ducks, hawks and songbirds. Any development would have to include a large conservation easement to protect this habitat.

The schools of this area are already full and facing major decisions concerning bond issues to handle the current level of growth. A development of any size will have a significant impact on these already stressed facilities. Before the proposed action is considered further, these potential adverse effects must be evaluated.

After considering the proposed alternatives, I support Alternative 5 (purchase of the property desired by the National Guard and retention of the Head Ranch) as the only one which avoids future land use conflicts.

Sincerely,

Elizabeth Olberding

Elizabeth Olberding M.D.
5770 Sharocal Drive
Helena, Mt. 59601
449-4924

P.O. Box 27
Fort Harrison, MT 59636
7 February 1995

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59604-4789

Dear Sir:

I have read the draft Environmental Assessment describing the proposed exchange of the Head Ranch for land currently leased by the National Guard. The document fails to address the foreseeable effects of this action on the Head Ranch. I am persuaded that the proposed action would have adverse environmental consequences, including harmful effects on water resources, roads, schools, and wildlife.

After considering the proposed alternatives, I support Alternative 5 (purchase of the property desired by the National Guard and retention of the Head Ranch), as the only option that avoids future land use conflicts.

Yours truly,

Susan Epstein, M.D.

2-7-95

Department of Military Affairs
Environmental Office
P.O. Box 4789
Helena, MT 59624

Dear Sir:

We would like to go on record as opposing the proposed land trade of the Head Ranch for property west of Fort Harrison. The primary reason is that we don't believe the water resource of the area will support more development. Several wells in the area are already showing declining production, and more demand from new development will only increase this trend.

I would support alternative 5 of the draft EA, which would allow Fort Harrison to acquire more property to the west. This would accomodate the expanded training functions deemed necessary at the Fort.

Thank you for this opportunity to comment on the draft proposal.

Sincerely,

Warren Norton
Mrs Carolyn L. Norton

738 Franklin Mine Rd
Helena, MT 59601

[illegible] 14, 1995

Department of Military Affairs
Environmental Office
Box 4789
[illegible]
Helena MT 59604-4789

[illegible]

[illegible] regarding your agency's environmental assessment of the proposed Head Ranch property exchange.

We feel the proposed property exchange would have negative effects on both the Head Ranch & surrounding area — particularly a severe drain on the existing water supply and tremendous wear on the roads which are already in very poor condition. We also feel the schools in the area would see increased student population which have not been considered.

[illegible] feeling that state and federal funded lands should [illegible] lands are [illegible] of the state of Montana [illegible] be sold or traded at the whim of an individual or agency.

After considering this proposal our support would surely lie in favor of no land exchange alternative No. 5.

Sincerely,
[illegible]
[illegible]
[illegible]

Montana Department
of
Fish, Wildlife & Parks

Helena Resource Area
1404 Eighth Avenue
Helena, MT 59620

December 14, 1994

partment of Military Affairs
vironmental Office
tn: Clif Youzans
). Box 4789
lena, MT 59604-4789

: Fort Harrison Land Exchange

ar Mr. Youzans,

e following comments are in reference to the proposal to exchange e Head Lane property, now owned by the Montana Army National ard (ARNG), for lands currently leased by the ARNG in the Blue oud area. Consequences for wildlife are briefly considered here. further information is required, please call me at 444-4184.

e Head Lane property, occurring as it does along Sevenmile Creek, anriboy riparian habitat in an otherwise open sagebrush/prairie mmunity. The property is also becoming an island of relatively disturbed habitat as subdivisions expand throughout the ratchgravel Hills country and the Helena valley in general.

is portion of Sevenmile Creek, between the Scratchgravel Hills bout [illegible] ctions of BLM land) and Mount Helena (Helena National rest [illegible] Mile Creek watershed) is a natural travel corridor for ldlife. We consistently receive calls regarding road-killed imals on the Spring Meadow road and reports of extensive beaver tivity. Deer, moose, lions, bears and a variety of other ldlife utilize this corridor as they move between these parcels public lands.

e Blue Cloud property is steep, open and relatively uninhabited humans. It is utilized as yearlong habitat for 200-300 mule er and winter habitat for approximately 70 elk. Although it is rrently in private ownership, the likelihood of extensive bdivision and thus loss of wildlife habitat is less likely for is piece of property than for the Head Lane parcel.

Fort Harrison Land Exchange December 14, 1994

From the perspective of wildlife impacts, the No Action Alternative would have the least negative consequences for wildlife if the status quo could be maintained. If the exchange does occur, a conservation easement to protect wildlife habitat on the Head Lane property would be beneficial.

Thank you for this opportunity to comment.

Sincerely,
Gayle Joslin
Gayle Joslin
Wildlife Biologist

(xchg-ng.mlt)

Department
of
Wildlife & Parks

Helena Resource Area
1404 Eighth Avenue
Helena, MT 59620

December 11, 1994

artment of Military Affairs
ironmental Office
n: Cliff Youmans
. Box 4789
ena, MT 59604-4789

Fort Harrison Land Exchange - additional comment

ar Mr. Youmans,

believe I overlooked the benefits of Alternative 2.1.4 Outright
chase of All Inholding, Retain Head Ranch as described in the
cription of the Proposed Action and Alternatives. It appears
at this alternative, if chosen would accommodate the needs of
ldlife more directly than the No Action Alternative (2.1.1).

wing that pressures upon wildlife habitat are significant in the
ena Valley, it would be in the best interest of this pubic
source if lands that have been in public ownership remain so.
e current subdivision trends on private lands severely and
manently compromises the future of wildlife. If Alternative
.4 were selected, it seems that existing and future wildlife
itat needs could be accommodated to some extent within the
erations of the Montana Army National Guard.

addition to comments submitted previously regarding wildlife
itat use of the area, as well as consideration of a conservation
sement on the Head Lane property, should it be traded. Please
dicate in your records that the Montana Department of Fish,
ldlife & Parks endorses Alternative 2.1.4, Outright Purchase of
l Inholding, Retain Head Ranch. Thanks for this opportunity to
ment.

ncerely,

yle lin
ld Biologist

Montana Department
of
Fish, Wildlife & Parks

1408 East 9th Ave.
Helena, MT 59601

December 2, 1996

liff Youmans
ept. of Military Affairs
nvironmental Office
.O. Box 4789
elena, MT 59604-4789

ear Cliff:

I am writing in response to your request to provide comments
o the proposed land exchange of the Head Ranch property.

The fisheries data we have in our files is skimpy. We
tocked brown trout in Sevenmile Creek in 1963 (above your
roperty), and although this species is no longer believed to
ccur in the stream, they were documented to have successfully
eproduced at least once. Fish surveys in the 60s, 70s and
ngler reports in the 80s indicate that the stream just upstream
rom your property has eastern brook trout, rainbow trout, white
ucker, longnose sucker and mottled sculpin. These species
pparently reproduce successfully. None of these species have
ny special status or designation in Montana, nor does our
epartment have any specific concerns about the fish in Sevenmile
reek.

Your report that Sevenmile goes dry about every other year
(during the summer I presume) means that fish would have to
recolonize in the fall or during a wet year. Given the frequency
of d[illegible]ring, it is likely that recolonization never produces
the [illegible] densities that would occur if the channel was
perma[illegible]ly wetted. It would not surprise me (although I speak
without facts) if young-of-the-year fry of all fish species
emigrate to your property every spring from spawning areas
upstream, only to be trapped and killed as irrigators divert all
the water in the summer.

Lack of water is only part of the problem with aquatic
habitat in Sevenmile Creek on your property. Existing livestock
and agricultural practices apparently have removed much
streamside vegetation, providing less cover for fish and poor
shielding from solar heating in the summer. Also, even if water
was available for fish, poor habitat conditions would probably
keep numbers below [illegible]

Youmans/page 2

The effects of a land exchange on the fishery resource would
depend on the future uses of the land. If irrigation diversions
increased in frequency or magnitude, or if the destruction of
streambank vegetation by livestock or plowing increased, then the
minimal fishery resource that exists now could be further
diminished. If the land is developed for housing, it seems
likely that the first lots would be along Sevenmile Creek.
Additional destruction of streambank vegetation could occur if:
1) shrubs were removed to make lawns; 2) if rip-rap or other
types of revetment were used to stop bank erosion into someone's
lawn or property; or 3) if portions of the riparian area were
filled in to make room for flat areas for houses. On the other
hand, if the developer imposes a setback requirement from the
water's edge, the habitat may actually improve. Would it be
possible for the MT ARNG to stipulate such a requirement in the
exchange? Or perhaps a conservation agreement to that effect?

I hope these comments are of some use to you. Give me a
call if you have any questions.

Sincerely,

Don Skaar
Helena Area
Fisheries Management Biologist

artment of Military Affairs
iron[illegible]al Office
Box
0 North Main
ena, MT. 59604

John Stanaway
5955 Sharptail Dr.
Helena, MT. 59601

tlemen, Feb.15.1995

The draft environmental assessment for the Head Ranch property hange does not take due consideration of the consequences to the al water table.

I feel further evaluation in accordance with MEPA and NEPA uirements are in order.

Of the alternatives listed, I feel option number 5 (National rd purchase of additional property allowing retention of Head ch in total) to be the only option which avoids conflicts with sent land use.

cerely,

hn Stanaway
6)4494313

John Stanaway

RECEIVED
FEB 17 1995

Department of Military Affairs
Environmental Office
PO Box 4789
1100 North Main
Helena, MT. 59604

Janet Jones
5955 Sharptail Dr.
Helena, MT. 59601

Dear Sirs, February 15, 1995

I wish to express great concern over the proposed Head Ranch property land exchange to a private developer. I donot believe the environmental impact of such a trade and subsequent development (in specific the water supply impact) has been adequately addressed. Before proposed action of this nature is considered further, I think further evaluation in accordance with SEPA and NEPA requirements are in order.

Of the alternatives presented, I believe Option 5 (purchase of additional property required by
the National Guard in order to allow the Head Ranch property
to remain intact)is the best alternative.

Thank-you.

Janet Jones
Janet Jones
(406)469-4313

cf: Con Donnelly
ENV
FMO

RECEIVED
FEB 17 1995
ADJUTANT GENERAL

City of Helena

December 28, 1994

Department of Military Affairs
Environmental Office/Attn: Clif Youmans
PO Box 4789
Helena, MT 59604-4789

Dear Mr. Youmans:

The Helena/Lewis and Clark Historic Preservation Commission (HPC) discussed the Montana Army National Guard's proposed land exchange adjacent to Fort Harrison at their monthly meeting on December 14, 1994. Those properties include some former mining claims, and may contain some potentially historic and prehistoric sites.

The HPC encourages the Department of Military Affairs to work with the State Historic Preservation Office (SHPO) to document historic and prehistoric sites on the properties, and to identify mitigation requirements if historic and prehistoric sites will be affected by this land exchange. A file search should be done to identify sites that have already been inventoried. Optimally, this documentation and mitigation should be done for both the property presently owned by the National Guard (that is proposed to be exchanged), and the land that would be acquired with the proposed exchange. The HPC anticipates that this information would be included in the environmental assessment before the land is exchanged.

[illegible]nk you for the opportunity to comment.

[illegible]cerely,

Kathy Macefield

Kathy Macefield
Historic Preservation Officer

File: [illegible]

316 N. Park, Helena, Montana 59623 Phone (406) 447-8000

LEWIS AND CLARK
CITY-COUNTY HEALTH DEPARTMENT

March 1,1995

. Cliff Youmans
partment of Military Affairs
vironmental Office
00 N. Main
lena, MT 59601

: Fort Harrison Land Exchange

ar Mr. Youmans:

rsuant to our conversation of February 14, 1995, I have reviewed a draft Environmental Assessment for the proposed land exchange d offer the following comments:

The Lewis and Clark County Water Quality Protection District (WQPD) measures and records the water level at a monitoring well located to the south and east of the Fort Harrison sewage lagoons on a monthly basis. A hydrograph for this well is available upon request.

The WQPD, in cooperation with the U.S. Geological Survey, have embarked on a bedrock aquifer assessment in the Helena area. The area being studied includes the Scratchgravel Hills and an area to the southwest of the Head Ranch property. Preliminary results show evidence of the water table being lowered as a result of additional growth and development in these areas. Several well owners have redrilled wells to deeper depths to obtain enough water for beneficial use. The WQPD and USGS have submitted a grant proposal to the Montana DNRC for an in-depth assessment of the bedrock systems; if approved, the study will begin July 1.

Two reports ("Scratchgravel Hills Geohydrology" by Wayne Wetzel and Debra Hanneman, 1993, and "Scratchgravel Hills Geohydrology: A Re-evaluation" by Kevyn Wetzel, 1993) discuss the availability of groundwater in the Scratchgravel Hills. In addition to raising concerns regarding water availability in conjunction with additional growth, there is a discussion regarding the potential for groundwater contamination from surficial recharge. I recommend that these reports be reviewed prior to completion of the final Environmental Assessment. Copies are available upon request.

An investigation of impacts from sewage lagoons was performed by Hydrometrics, Inc., in 19[illegible], at the request of Lewis and Clark County Environmental Division. A well located to the north of the sewage lagoons was sampled at that time, and the [illegible]ng results are available in the report.

Mr. Cliff Youmans
March 1, 1995
Page 2

I hope this information is helpful. If I can provide you with additional information, please contact me at 447-4361.

Sincerely,

Vivian Drake
Vivian Drake, Supervisor
Water Quality Protection District

cc: Mr. Michael McHugh, County Planning

Feb 2 - 1995

ear Mr. Wheeler,

My following comments may seem ival but yet we've given some thought to them nd decided to share it with you.

We have lived next to the Head Ranch for just - 20 years. We have enjoyed the beauty of the land, . fun of watching "our" Army in action and ing the "jumpers" These are big pluses in our merica, but there has been one ugly item that have not noticed anyone mention in the papers. The sewage pond has times when it is really d. Going down the road - we KNOW to turn off e heater fan on the car - a long ways away - ther direction - When we first moved here, I didn't lize the full story - but after calls to Fort Harrison, The County Health Dept, they began to convince -- t it is working fine --. It is meant to what it is doing! But stink it did - stink it s! Our home is probably one of the closest and times you don't spent time outside - The smell stomach turning. I realize the pond was here when bought - -- so it was not for me to keep calling one to "fix it" -- but I know that others are

[illegible]
Plant -- and they call the State - County - City - often about that smell -.

Does the Fort plan on building a full scale treatment plant on Fort property and those closer the pond? Or is the Fort & the new Developer ready to handle the complaints one is sure to have if ~~they~~ people live any closer than we do?

I believe the pond needs a big zone around it, just so it can continue to do its work. (Still then Spring [illegible])

From your letter you sounded like it isn't your concern what happens to the Head Ranch once the Fort is free from it. I realize that is the way business works but neighbors are honest and try to look beyond the immediate. I've tried to be a good neighbor to the Fort and in the past, Fort Harrison has been a good neighbor too.

One other question, if I might - How about the Ranch buildings? The old timers around here talk of Dr. Head and we've been told it was placed on register of Historic buildings - Not so? It was such a shame when the train line took off the roof of the barn and no one replaced it.

Thank you for your ear -
Evelyn Norton
7[illegible]8 Franklin Mine
Helena Mt 59601

800 Treeline Trail
Helena, MT 59601-9460
22 June 1995

Department of Military Affairs
Attn: ENV
PO Box 4789
Helena, Montana 59604-4789

Dear Mr. Wheeler,

Thank you for sending us a copy of the Draft Final Environmental Assessment (EA) for the Montana Army National Guard Fort Harrison Land Exchange and giving us an opportunity to respond. We have read through it and have only a few comments.

This EA includes more detailed information in several areas, particularly biological and water resources. With regards to the latter, we noticed that our well is not shown on Figure 1, Location Map, of the PRC Addendum. We are not sure whether this map is exclusive of effect to other wells in the area or if it represents a sample. With regards to the former, the overall tone is that existing animal populations cannot be considered as important when considering what appears to be 'inevitable' development of these areas.

We are not particularly concerned about noise unless it increases. We abut BLM land and Training Site E, so we hear what sounds like a small-scale war going on just above us. We can live with that and the helicopters, although it would be more peaceful without either.

We feel that the EA once again addresses only the concerns expressed by the National Guard with respect to possible loss of live-fire ranges and training area. This is evidenced by the Executive Summary, paragraph 7, which states that "Minor short-term adverse impacts could occur to air and water resources if development were to occur on the Head Ranch." As residents and well owners in the Sunny Vista Subdivision, that adverse impact may not be so minor.

We understand that any opposition to the exchange is moot, since there is nothing short of disaster to stop it. It will be up to us to avert what we feel is likely to be a disaster should any major development of these lands occur by focussing on the future actions of the primary concerned party, i.e., Frank Gruber. That is where our next fight will be.

Sincerely,

KB Crogan

Karen B. Crogan

Sherry L. Myhre
863 Sunny Vista Road
Helena, MT 59601
406-442-4109

June 22, 1995

Department of Military Affairs
Environmental Office
PO Box 4789
1100 North Main
Helena, MT 59604-4789

RE: Proposed Head Ranch Property exchange comment on Environmental Assessment

Dear Sirs:

I received and studied a copy of the Environmental Assessment prepared by your agency regarding the Head Ranch property land exchange. Many issues remain unresolved, are not discussed in the EA and include potential problems that will effect myself as a property owner and the long range environmental balance of the entire Scratchgravel area. I would like to address some of the issues that I feel are important and have not been addressed sufficiently even after the many letters and comments requesting that this be done before moving ahead with the proposed exchange.

The water rights that are assigned to the Head Ranch area are significant. No mention was made in the EA how those water rights would be handled. The current problems with water rights adjudication in the state of Montana will illustrate how detrimental it has been to sell, divide and transfer properties without clear definition of how the decreed water rights will be handled. Several letters asked this question in the draft process and no clear answer was given. The water rights in question are previous to the water rights of the Sunny Vista Water Users Association and the Paydirt area water users association. Subdivision use or other indiscriminate use of those water rights would effectively eliminate water available to the current water users during many summers. How will this be apportioned? The use of the irrigation flows on these water rights affect the well levels and regeneration of some 15 property owners in the Sunny Vista area alone. We want to know that this action will not leave us high and dry in the future and if it does...who will be responsible?

The water investigation included in the EA clearly supports the potential for future severe water shortages in this area if potential subdivision is allowed. I feel that current water study information has been left out. There is a water study currently being done in the Sunny Vista area that has accurate information showing the impact of population growth on the wells. I would suggest that that material be included in this study of potential impact by the proposed property transfer.

The appraisal values for the property trade cause me great concern. The Military decision makers seem to be giving away property at a highly reduced appraised value to appease the threats of Frank Gruber to develop his property. There is NO comparable land within 15 miles of Helena that would sell so CHEAP! How do the citizens of the United States feel about their government holdings being given away! I can certainly understand the urgency in protecting the future of the Military Operations at Fort Harrison, but not in a wasteful and destructive manner. I hope that each and every citizen of this area will call for additional appraisals to get a true picture of the values involved before a very unbalanced trade is made to the advantage of Frank Gruber.

The EA consistently makes mention of the fact that POTENTIAL development of the surrounding properties is forcing this issue. On the other hand, the county planning department is discouraging development in areas such as the Gruber property is located for many very important reasons. In addition, no action has been taken by Gruber to file for sub-division or to develop this land in any way so it is just that.......a threat.......that is causing the government concerns to be rushing into an agreement that will be harmful to ALL of its neighbors and to the wildlife, environment, and citizens of this county. I would call for proposed development comments from the planning department, water rights, and all the county agencies that will be called upon to deal with the problems created from the Potential development.

In the same document the Military state that POTENTIAL development to Head Ranch properties are not required to be a part of their concern and as a result have addressed those potential consequences as small and temporary. This seems rather disappointing that they can say they are in danger from development near the Fort and dismiss our danger from development near our homes. POTENTIAL development is the reason a developer like Frank Gruber is working so hard to get this property. In my view the POTENTIAL for development of the Head Ranch property is very high in comparison with the POTENTIAL for development of the steep, dry, rocky hillsides that Gruber wants to trade. I call for an assessment to be made on the POTENTIAL for development comparison of the two properties if that is going to be used as a reason for doing this or not doing that. The surrounding property owners and the people of this county are the ones who will live with these decisions, so let us know just what this POTENTIAL really is.

I have sent information, concerns, and patient requests to a great many of the decision makers involved in this process. I have received an answer from each one but no response to the effects that we are talking about. The EA is a carefully prepared and very large document that is still not addressing the issues that the people of this community are concerned about. It is worded in a manner that negates impact and absolves responsibility. In my opinion the government is getting ripped off, the population of the State of Montana is getting ripped off, and no one seems to be able to see that there are MANY other alternatives to the action that has already been chosen, in haste, to satisfy the impatient developer. I call for a list of all the alternatives to this action to be compiled from the county planners, neighboring community, property owners and anyone paying taxes that support the Military Operations at the Fort and then make those alternatives public............something might result that is beneficial development for the future of the state rather than development for the sake of a developer. Lets learn a lesson from the mistakes of so many other developing communities and make a decision in the beginning that makes sense for EVERYONE involved.

Sincerely,

Sherry L. Myhre

Sherry L. Myhre
863 Sunny Vista Road
Helena, MT 59601
406-442-4109

cc:

L&C County Planning Department
Lewis and Clark County Commissioners
US Senator Conrad Burns
State Representative Ed Grady
Senator Max Baucus
Representative Pat Williams
State Senator Tom Beck
Governor Marc Racicot

6-22-95

Dept of Military Affairs
Box 4789
Helena, Mt. 59604-4789

Subject: Head Ranch Land Exchange

I have reviewed the final draft of the environmental assessment concerning this land exchange, and I feel compelled to comment one more time. I am opposed to the land exchange. Federal and state governments should act to protect public lands and not offer them up to private developers. Mr Gruber will most certainly subdivide these lands and in the process will create more headaches for county planning officials and problems for residents living in adjacent areas

Your action would be understandable if no other choices were available. However, in this situation, other viable alternatives do exist, but you choose not to use them. I consider this land exchange to be a disgusting display of government arrogance toward the desires of its own citizens. Your action is not being opposed by groups of East Coast elitists but by people who are your neighbors. It's a sad commentary that you continue to pursue this land exchange.

Sincerely yours,
Ken Mitchell
4490 Paydirt Dr
Helena, Mt. 59601

SUSAN EPSTEIN, M.D.
SPENCER SHROPSHIRE, M.D.
BOX 27
FORT HARRISON, MONTANA 59636

20 June 1995

Department of Military Affairs
Attn: ENV
P.O. Box 4789
Helena, MT 59604-4789

Dear Sir:

We have read the draft final environmental assessment, and are distressed at the way this matter has proceeded. We have serious concerns about the environmental impacts of the proposed action.

The public is asked to believe that Mr. Gruber intends to develop the land next to the firing range, although no application has been filed for subdivision. He has refused a buy-sell agreement and has pushed for rapid trade for the Head Ranch land. We are also told that he has no plans to develop the Head Ranch, which the EA notes is more suitable for development than the land to be traded. Furthermore, Mr. Gruber has refused to place conservation easements on the Head Ranch. It appears that Mr. Gruber is anxious to acquire the Head Ranch with the option to develop it. Therefore it is reasonable for the EA to directly address the impact of development of the Head Ranch as a forseeable consequence of trading it to a private individual. It would also be reasonable to appraise the land for its potential for development, rather than as agricultural land, unless it is covered by conservation easements.

Presuming that the Head Ranch will be developed in the forseeable future, if it is traded, raises the following environmental concerns:

a. Soils - road and home construction would increase soil erosion and the spread of noxious weeds.

b. Air quality - additional homes and road traffic would increase air particulate matter and adversely affect air quality.

c. Noise - additional homes, vehicles, persons, pets, etc. would increase noise levels in the area.

d. Biological Resources - wildlife along Sevenmile Creek would be adversely affected by development of the Head Ranch and increased traffic along Head Lane.

e. Groundwater - the USGS has documented that the bedrock aquifer from which Sunny Vista wells draw water is being mined; that withdrawals currently exceed recharge. Further development into this bedrock aquifer on the Head Ranch could jeopardize existing wells. Furthermore, the USGS data quoted in the PRC study shows that wells adjacent to the irrigation ditch are recharged by

flow in the ditch. Should surface irrigation water be reduced or diverted, these wells could be adversely affected.

f. Surface water - development of the Head Ranch could adversely affect surface water availability, depending on how irrigation rights are apportioned and used. Surface water quality could also be adversely affected by runoff and soil erosion. Conservation easements along the creek and agreement about irrigation rights might reduce these concerns.

The EA has not addressed the functions the Head Ranch now serves for the Guard. In addition to providing a location for training, it provides a buffer zone for helicopter flights. The county development plan requires restrictions on development around the airport because of noise, and presumably also for safety. Does the National Guard not need a similar area for its helicopter activity? Additionally, flights of the National Guard helicopters over the Sunny Vista subdivision and BLM lands would likely be less well tolerated if the National Guard no longer owned adjacent land and if residential density increased.

The public is not well served by a land exchange which delivers valuable land to a developer in order to allow him to make a profit at taxpayer expense. In addition to its agricultural use, the Head Ranch is a property of great value to the public as open space, wetland, and wildlife habitat. If the National Guard wishes to divest itself of this land, it should be considered for other uses such as parkland, greenbelt, athletic fields, etc. Perhaps a coalition of concerned parties could purchase the Head Ranch (with conservation easements attached) and the proceeds could be used to purchase the Gruber land.

Yours truly,

Susan Epstein

Susan Epstein

Spencer Shropshire

Spencer Shropshire

June 15, 1995

Department of Military Affairs
Attn: ENV, John Wheeler
P.O. Box 4789
Helena, MT 59604-4789

Dear Sirs:

I am in receipt of the Montana Army National Guard's draft final environmental assessment regarding trading of the Head Ranch.

I am a State employee and as such I am very sensitive to criticism of State Government Agency actions and efforts because generally State employees operate in an unbiased and fair manner. However, in this case I must admit to being very disappointed in the efforts of the Department of Military Affairs to conduct an unbiased EA and the EA is inadequate and a sham in my opinion.

First of all, the EA categorically ignores the potential impact of future development of the Head Ranch with the excuse of "it is unknown if future development would occur on the Head Ranch" and "Mr. Gruber is on record as indicating he has no immediate plans for the Head Ranch and it is beyond the scope of this EA to attempt to address future unconnected actions". Baloney!! If you trade the Head Ranch to a long-time Helena area land developer - the land will be developed! An EA worth anything must assume the Head Ranch will be developed if traded to Mr. Gruber and assess impacts accordingly.

Second, I hate to appear unappreciative but I consider the special PRC Environmental, Inc. hydro-geological study to be totally worthless. What did it show or accomplish? A description of area existing hydrologic and geologic conditions is of no use - what is needed is an assessment of the impact of development of the Head Ranch on area surface (including irrigation) and ground waters, traffic, impact on wildlife, etc., etc.

I'm very disappointed at this half-hearted effort. Thanks for the opportunity to comment and I guess area residents will just have to learn to live with your inevitable decision to trade the Head Ranch to a land developer, in spite of adverse impacts and wide spread lack of support for your plan by your neighbors.

Sincerely,

James F. Brown, P.E.
4435 Paydirt Drive
Helena, MT 59601

22 June. 1995

Department of Military Affairs
ATTN: ENV
P.O. Box 4789
Helena. Mt.. 59604-4789

To Whom it May Concern:

Thank you for the opportunity to review the final EA for the proposed Head Ranch/Gruber/RV Ranch land swap.

I have to tell you that I have been watching this process with a growing sense of cynicism. This cynicism is nurtured by the astonishing disparity in the land values of the parcels in question having been cooked and adjusted by the Corps of Engineers to the point that the Montana National Guard is swapping 504 acres of prime agricultural/development land to Frank Gruber for a paltry 840 acres of barren, hillside land upon which one could not profitably raise a pair of goats.

Even by conservative estimates, the Head Ranch land is worth over $1,000/acre. Its appraisal was to have been predicated on the recent sales of comparable parcels. This is according to law, which even the Corps of Engineers is bound to obey.

An attempt was made, under the Freedom of Information act, to acquire the Corps appraisal of these parcels. The Corps sent a reply refusing the information. Their reply said, however, "This is not an official refusal. For an official refusal, you will have to apply to thus and such an office."

This was interpreted by me, correctly, I believe, to be typical obfuscatory blather. Show me where, in the immediate vicinity, one can acquire land such as is enclosed in the Head Ranch boundary for less than $1500/acre. I live in Sunny Vista. On my land, you can't even raise good looking loco weed, but it goes for upward of $3,000/acre.

The EA goes to great lengths to enumerate the devastating consequences on Ft. Harrison of development of any or all of the Gruber property. I believe that the Montana National Guard is being extremely short-sighted in championing the present alternative, for these reasons:

1) The Head Ranch is presently a buffer zone around Ft. Harrison. County ordinances address issues of noise and altitude around airfields in close proximity to housing developments.

Mr. Youmans has been careful to repeat that Mr. Gruber has not said that he wishes to develop the Head Ranch property. When I pointed out that the existing Gruber property has virtually no road access, that no subdivision permit would likely be forthcoming, that the only development which can legally occur at present is on patented mining claims, and that these claims are not being acquired as part of the present proposal and still remain a threat to the firing ranges, there was no comment. I see that this, at least, is given passing mention in the final EA, but renders ludicrous the assertion that development would close down the firing ranges.

2) You are overlooking the obvious alternative. That is, to offer a fair price for the land you need to assure the continued operation of Ft. Harrison. If the land owners refuse, condemn the land in the buffer zone.

I am interested in the long-term survival of Ft. Harrison as a military facility. If, after the proposed land swap is accomplished, you have left an avenue through which the Montana National Guard can be blackmailed by some freebooter building a shack on a mining claim overlooking your firing range, you haven't done

your jobs, have you? I know that this smacks of a "takings", and that in the present political environment it is not OK for the government to assert itself, but I object equally to essentially giving away money, to profit one man.

Again, I admit to being cynical about this whole process. The Governor states his hands are tied, because this is a Federal matter; the Senators and Representative Williams say their hands are tied, because it is a National Guard/Corps of Engineers matter. The Corps of Engineers is withholding information which, if released, would either legitimize or completely foul the present proposal, and the Montana National Guard is holding pro-forma public comment proceedings, and going on with what it originally intended to do, regardless.

Finally, thanks again for sending the EA for review. I always enjoy the opportunity of appearing to engage in the exercise of participative democracy.

Kindest Regards,

St Hall

Stan Hall
5770 Sharptail Dr.
Helena, Mt., 59601

June 21. 1995

Department of Military Affairs
Attn: ENV
P.O. Box 4789
Helena. Mt 59604-4789

Dear Sir:

I am addressing this letter to the final environmental assessment concerning the proposed land exchange involving the Head Ranch and Mr. Gruber's land adjacent to the National Guard firing range.

1. The land at the Head Ranch has been assessed as agricultural land and has been assigned a dollar value that is laughable at current market value in the Helena valley. To assume Mr. Gruber has no interest in development is foolish, in light of the anxiety Mr. Gruber has to push this trade through and his disinterest in pursuing any conservation easements on this property. For the EA to not address the consequences of development seems negligent.

2. If development is the purpose of the land trade, then multiple environmental issues should be addressed, as follows:

a. Ground water - As a resident of an area served by wells that could be adversely impacted by any significant concentration of development on the same aquifer, I feel the water use should be addressed. The USGS has documented that the withdrawals in Sunny Vista currently exceed recharges and development may adversely affect this limited resource.

b. Wildlife - The Seven mile Creek area is used by a significant wildlife population that would be impacted.

c. Noise - Current Guard activity adjacent to Sunny Vista is tolerated but development of a higher density may not be so agreeable to the noise of helicopter and aircraft flyovers or to the disruption caused by Guard maneuvers on the public land adjacent to private property.

3. I understand the need for the National Guard to protect the firing range but I wonder how functional they will be if significant development is undertaken on the Head Ranch property, removing the buffer they currently have. I strongly feel as a taxpayer that this exchange is not a fair exchange, and that the National Guard is giving up a piece of property that is worth much more than the land they will receive in exchange.

Sincerely,

Elizabeth Olberding

Elizabeth Olberding M.D.
5770 Sharptail Dr.
Helena. Mt. 59601

		Vol.	Year	No.
MONTANA OPERATIONS MANUAL	Management Memo Number	**1**	01	1
MANAGEMENT MEMO	Date Issued	12/28/2000		
	Date Effective	**01/02/2001**		

SUBJECT **Personal Car/Airplane Mileage Rates**

TO: All State Agencies

FROM: Dave Ashley, Acting Director
Department of Administration

This memo **revises** the information contained in Management Memo 1-00-1 dated 01/07/00. Please remove Management Memo 1-00-0 dated 01/07/00 from your manual.

Reimbursement for personal car mileage driven in connection with State business will **increase** from the present 32.5 cents per mile to **34.5** cents per mile commencing **January 1, 2001.** In order to claim reimbursement at 34.5 cents, the State employee must qualify according to the Administrative Rules of Montana (A.R.M.) Section 2.4.114.

If qualification is not met according to the above section, **and** approval is obtained from the Director of your Department to use your personal car, the new rate is **31.5** cents per mile (as opposed to the old rate of 29.5 cents per mile). The effective date for this new rate is also **January 1, 2001.**

The reimbursement rate for private airplane usage will also increase to 69 cents per nautical mile (see MCA 2-18-503(4)). The new rate is effective **January 1, 2001.**

These increases are authorized by MCA Section 2-18-503 and are made in conjunction with official notification of increase by the Internal Revenue Service. Questions should be directed to the Accounting Bureau at 444-3092.